MHC-4700/6700

SERVICE MANUAL

AEP Model
MHC-4700/6700

UK Model
MHC-6700

- MHC-4700/6700 is composed of following models. As for the service manual, it is issured for each component model, then, please refer to it.

COMPONENT MODEL NAME FOR MHC-4700/6700

	MHC-4700	MHC-6700
AMPLIFIER	TC-H4700	TC-H6700
CD PLAYER	CDP-H4700	CDP-H6700
TUNER	ST-H6700	ST-H6700
CASSETTE DECK	TC-H4700	TC-H6700
SPEAKER SYSTEM	SS-H4700	SS-H6700

SPECIFICATION

Power requirements	AEP, G, IT model: 220V—230V, 50/60Hz UK model: 240V, 50Hz
Power consumption	4700: AEP, G, IT model: 160 watts 6700: AEP, G, IT model: 150 watts 6700: UK model: 300watts
Dimensions	Approx. 225×365×275mm (w/h/d) ($8^{7}/_{8} \times 14^{3}/_{8} \times 10^{7}/_{8}$ inches) incl. projecting parts and controls
Weight	4700: Approx. 10.8kg (23 lb 13 oz) 6700: Approx. 11.7kg (25 lb 13 oz)
Supplied accessories	Remote Commander (1) 4700: RM-S470 6700: RM-S670 Sony SUM-3 (NS) batteries (2) AM loop antenna (1) FM antenna (1) AC power cord (1) Flat cord (2)

Design and specifications subject to change without notice.

- G : Germany model
- IT: Italian model

PARTS LIST

NOTE:
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS ******************************	
	1-501-369-11	ANTENNA	
	1-501-374-11	ANTENNA, LOOP	
⚠	1-558-032-11	CORD, POWER (UK)	
	1-574-264-11	CORD, LIGHT PLUG (6700)	
	1-574-927-21	CORD (WITH CONNECTOR) (TA-ST)	
⚠	1-575-131-11	CORD, POWER (AEP, G, IT)	
	1-590-855-01	CORD, SPEAKER (SS)	
	1-590-870-11	CORD (WITH CONNECTOR) (TA-TC-CD)	
	1-693-085-11	REMOTE COMMANDER (RM-S470) (4700)	
	1-693-087-11	REMOTE COMMANDER (RM-S670) (6700)	
*	3-378-785-01	CUSHION (FRONT) (TC)	
*	3-378-786-01	CUSHION (REAR) (TC)	
	3-694-922-01	SHEET PROTECTION (SS)	
	3-754-881-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, CHINESE, DUTCH) (6700:AEP, UK)	
	3-754-881-41	MANUAL, INSTRUCTION (GERMAN, SWEDISH, ITALIAN, PORTUGUESE) (6700:AEP, G, IT)	
	3-755-075-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH SPANISH, CHINESE, DUTCH) (4700:AEP)	
	3-755-075-41	MANUAL, INSTRUCTION (GERMAN, SWEDISH, ITALIAN, PORTUGUESE) (4700)	
	4-910-323-01	SHEET PROTECTION (TC)	
	4-920-941-01	SHEET (B), PROTECTION (CDP)	
*	4-945-075-01	CUSHION (RIGHT) (TA)	
*	4-945-076-01	CUSHION (LEFT) (TA)	
*	4-945-080-01	CUSHION (SS)	
*	4-951-877-01	CUSHION (ST)	
*	4-952-429-01	INDIVIDUAL CARTON (CDP, ST, TA, TC) (4700:AEP)	
*	4-952-435-01	INDIVIDUAL CARTON (CDP, TA, TC) (4700:AEP, G, IT)	
*	4-952-441-01	INDIVIDUAL CARTON (ST)	
*	4-952-561-01	INDIVIDUAL CARTON (CDP, ST, TA, TC) (6700:AEP, UK)	
*	4-952-562-01	INDIVIDUAL CARTON (CDP, TA, TC) (6700:AEP, G, IT)	

MINI Hi-Fi COMPONENT SYSTEM

SONY®

9-957-234-11

Sony Corporation
Audio Group

English
92E0459-1
Printed in Japan

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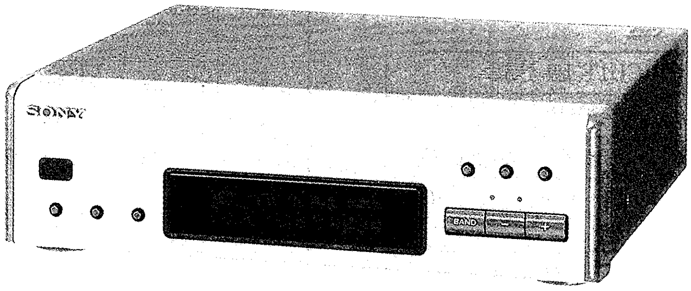
Published by Customer Relations and Service Group

ST-H6700

SERVICE MANUAL

E Model
Australian Model
Tourist Model



This set is the tuner
section in FH-E858

SPECIFICATIONS

System	FM stero, FM/MW/SW superheterodyne tuner
FM tuner section	
Tuning range	87.5 — 108 MHz
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz
AM tuner section	
Tuning range	MW: 531—1,602kHz SW: 3.20—7.30MHz 9.50—21.75MHz
Antenna	AM loop antenna, External antenna terminals
Intermediate frequency	450 kHz

Design and specifications subject to change without notice.

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FM STEREO/FM-AM TUNER

SONY®

SECTION 1
SERVICING NOTES

1-1. SUPPLY OF POWER DURING SERVICES

Because the equipment is not provided with any power supply, it is operated with power supplied from the amplifier TA-H4700 used in the series. The equipment requires the following 4 types of voltages. Therefore, connect the equipment to TA-H4700 for services such as repairing with power supplied, because it will be too complicated to supply these voltages individually.

VOLTAGE	MAJOR CIRCUIT IN USE
AC 3.9V	FL tube filament voltage (VF)
DC −24V	Display controller IC701 grid voltage (VG)
DC 5.6V	Display controller IC701, Tuner PLL IC81 Vcc
DC 12V	Tuner RF, FM/AM DET IC21 Vcc

1-2. SERVICE MODE TO CHECK TIMER ON-OFF

It is possible to check whether the timer normally functions while being connected with an amplifier.

(1) Connect the equipment to the amplifier TA-H4700 and set the SYSTEM POWER switch to STANDBY state.
(2) Set the time of the tuner to any time.
(3) Press 3 switches "BAND", "−" and "MEMORY/NEXT" at the same time (while pressing "BAND" and "−" beforehand, finally press "MEMORY/NEXT")
(4) FL display tube

10 : 21
↓ 0.5 sec
10 : 22
↓ 0.5 sec
10 : 23
↓ 0.5 sec
10 : 24
↓ 0.5 sec
FUNCTION : CD → POWER ON
↓ 3 sec
0 : 00 → POWER OFF

(5) Completion

Note : After completion of the checking above, data preset in the memory IC702 is erased while resetting the memory to the next page state upon shipping from the works, so be sure to recover the same frequency as that before the repairing.

• Frequencies initially preset

	FM	MW		SW
		9kHz STEP	10kHz STEP	
1	87.5MHz	531kHz	530kHz	3.20MHz
2	88.0MHz	603kHz	620kHz	3.50MHz
3	98.0MHz	999kHz	1050kHz	5.00MHz
4	100.0MHz	1404kHz	1490kHz	6.50MHz
5	108.0MHz	1602kHz	1710kHz	7.30MHz
6	*1	*2	*2	9.50MHz
7				10.00MHz
8				15.00MHz
9				20.00MHz
10				21.75MHz
11—20	*1			

*1 The same frequency values are set for the preset memory No.6-No.10, No.11-No.15 and No.16-No.20 as for No.1-No.5 respectively.

*2 The same frequency values are set for the preset menory No.6-No.10 as for No.1-No.5.

1-3. SERVICE MODE TO CHECK FL TUBE AND KEY INPUT

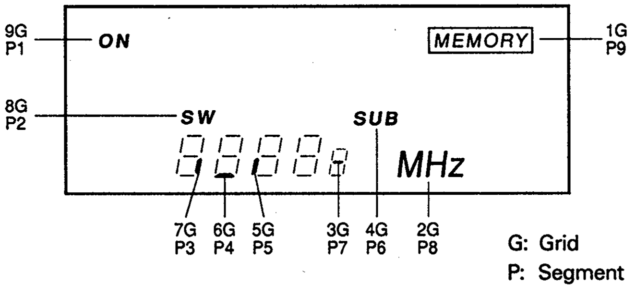
It is possible to check FL tube all ON grid, segment and key input.

(1) Connect the equipment to the amplifier TA-H4700 and remove the AC cord of the amplifier out of the AC receptacle.

(2) While pressing 3 switches "BAND", "−" and "MEMORY/NEXT" at the same time, insert the AC cord of the amplifier into the receptacle.

(3) Thus, all FL display tubes light up. By pressing "+" or "TIMER CONTROL" in this state, partial lighting or key input checking, respectively, is effected.

Partial lighting : Indicates the mode to check complete connection between the grid and segment of the FL tube. The condition is normal when the following indication is effected. By pressing "+" or "−" in the partial lighting mode, the status returns to key input checking or all ON in (3), respectively.



Key input checking : Shows the mode to check key input into 9 keys on the front panel. "0" is indicated at first, and every time a different key is pressed, indicated number is increased. After completion of pressing all 9 keys, "PASS" is indicated.
(Once a key is pressed, pressing it again is rejected.)

(4) After the completion of the checking, the equipment recovers normal operation by once removing the AC cord and inserting it again into the AC receptacle.

1-4. HOW TO FORCEFULLY TURN POWER ON

The equipment is not provided with any power switch. Therefore, power ON/OFF is controlled in the amplifier side. However, even without an amplifier, power is supplyable to the equipment according to the following methods provided any type of power is available, e.g. using a special jig or supplying the 4 types of voltages individually.
(When power is supplied from the amplifier, power is turned ON only for the tuner.)

(1) Supply power.

(2) Press 3 switches "STEREO/MONO", "−" and "MEMORY/NEXT" at the same time.
(Press "STEREO/MONO" and "−" beforehand, and finally press "MEMORY/NEXT".)

However, when the equipment is started up by the methods above, service modes TIMER ON/OFF and FL tube and key input checking are not operable.

SECTION 2
GENERAL

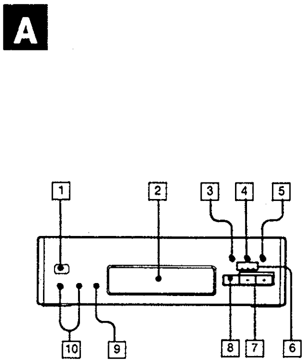
This section is extracted from instruction manual.

Parts Identification

Refer to the pages indicated in ● for use of the buttons.

Tuner Section A

1. Remote control sensor
2. Display window
3. MEMORY/NEXT button ㉖ (58) (106)
4. MODE button (54) (60)
5. STEREO/MONO (stereo/monaural) button (56)
6. TUNING/PRESET indicators
7. TUNING PRESET/TIMER –/+ buttons
8. BAND selector (54)
9. REC TIMER button (110)
10. WAKE UP TIMER 1, 2 / CLOCK SET buttons ㉖

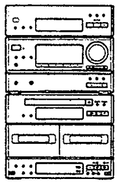


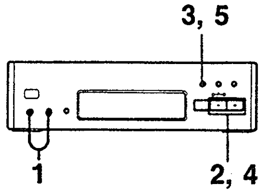
Clock Setting

Setting the Clock .

Example: Set to 9:25 in the morning.

1. **Press WAKE UP TIMER 1 and 2 at the same time.**
2. **Set the hour with the – or + buttons.**
3. **Press MEMORY/NEXT.**
4. **Set the minute with the – or + buttons.**
5. **Press MEMORY/NEXT.**
   The clock starts operating.

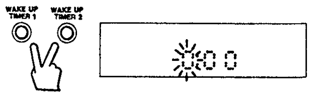




Information on the time

The model for other countries shows the time in 12-hour cycle.
AM 12:00 = midnight
PM 12:00 = noon

1



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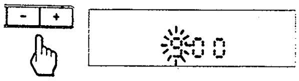

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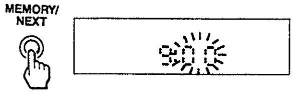

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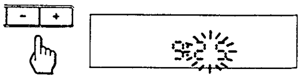


5

MEMORY/NEXT

When a power interruption occurs

The clock, timer and Wake Up Volume settings are all erased, and "AM 12:00" will flash on the display.

To change the frequency display to the time display

Press CLOCK DISP. on the remote commander. Press it again to change to the frequency display.

Radio

The automatic tuning allows you to receive stations whose signal is strong enough. When the signal is too weak, use the manual tuning.

Tuning in Automatically

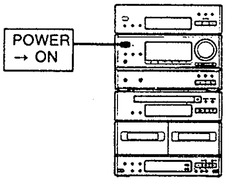
1 **Press BAND repeatedly until the desired band appears.**
As you press BAND, the band changes as follows:

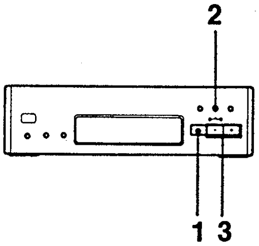
FM → MW → SW
↑____________↵

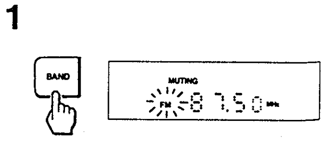
2 **Press MODE so that the TUNING indicator lights up.**

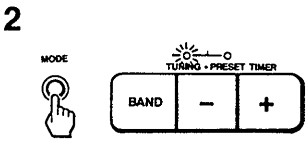
3 **Keep – or + depressed for more than 1 second.**
"AUTO" appears on the display and the unit tunes in a station automatically.

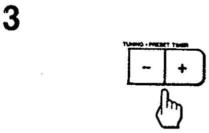
Repeat step 3 until the desired station appears.











Radio

Tuning in Manually

1 **Press BAND repeatedly until the desired band appears.**

2 **Press MODE so that the TUNING indicator lights up.**

3 **Press – or + repeatedly until the desired station appears.**

Indicator on the display

TUNED: Appears when a station with sufficient signal strength is tuned in.

STEREO: Appears when an FM stereo program with sufficient signal strength is received.

Antenna adjustment A

For MW and SW reception, find the best location for the supplied AM loop antenna.

When an FM program is noisy or hard to receive

Press STEREO/MONO so that "MONO" appears in the display. There will be no stereo effect, but the reception will be improved. Press the button again to restore the stereo effect.

Changing the MW tuning interval (except for the European and U.K. model)

The MW tuning interval is pœset at the factory to 9 kHz.

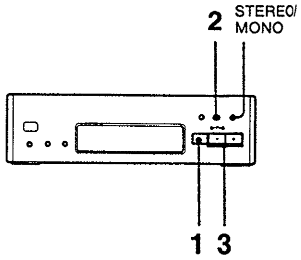
If you use the system where the frequency allocation system is different from the preset interval, change the interval as follows.

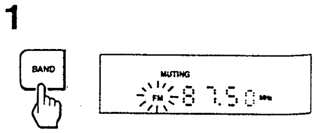
1 Turn on the power.
2 Tune in an MW station.
3 Disconnect the AC power cord.
4 Connect the AC power cord again while pressing TUNING +.

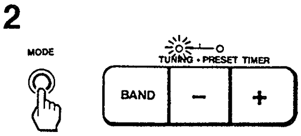
To reset the interval, follow the same procedure.

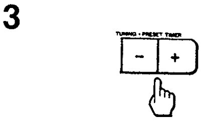
Important

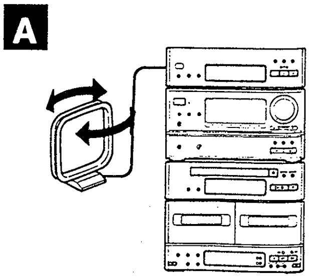
When the interval is changed, stored stations will be erased from the memory.











Radio

Storing Stations

You can store up to 20 FM stations, 10 MW stations and 10 SW stations in a desired sequence, so that you can tune in the stored station directly by entering the preset station number.
This operation is not possible with the remote commander.

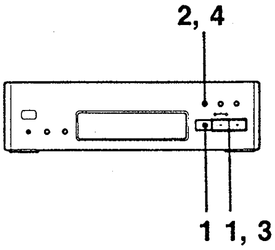
1 **Tune in the desired station.**

2 **Press MEMORY/NEXT.**
"MEMORY" and the preset station numbers appear on the display.

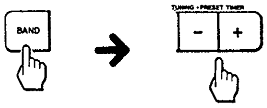
3 **While "MEMORY" is on (for several seconds), press – or + to select a desired preset number.**

4 **Press MEMORY/NEXT.**
"MEMORY" disappears, and the station is stored.

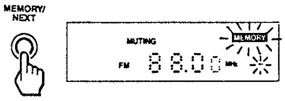
Repeat step 1 to 4 for each station to be stored.



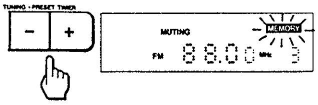
1


BAND
TUNING • PRESET TIMER
–
+

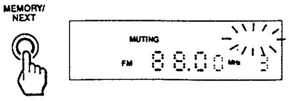
2


MEMORY/
NEXT
MUTING
MEMORY
FM 88.00 MHz

3


TUNING • PRESET TIMER
–
+
MUTING
MEMORY
FM 88.00 MHz 3

4


MEMORY/
NEXT
MUTING
FM 88.00 MHz 3

If you cannot store a station successfully
Press MEMORY/NEXT again so that "MEMORY" appears, and then proceed with steps 3 and 4 above.
Be sure to operate while "MEMORY" is on (about 4 seconds).

When you have selected the wrong preset station number
Press MEMORY/NEXT again and then proceed with the steps 3 and 4.

To change the preset station
Store a desired station at the desired preset number by proceeding with the above steps.
The station previously preset will be erased.
Erasing only is not possible.

Radio

To Tune in a Preset Station

Notes

- When you use the remote commander for the following operations make sure that the display of the remote commander shows "TUNER". If not, press TUNER on the remote commander.
- You cannot operate the buttons on the lid if the lid is open.

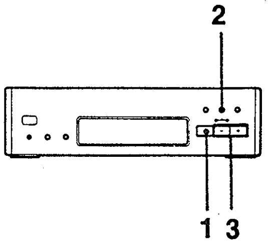
1 **Press BAND to select a desired band.**

2 **Press MODE so that the PRESET indicator lights up.**

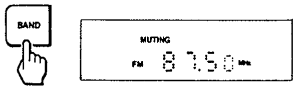
3 **Press – or + to select the desired preset station number.**

To tune in a preset station directly

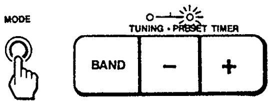
Possible only with the remote commander.
1 Press BAND to select a desired band.
2 Press the numeric buttons to select the desired preset station number.



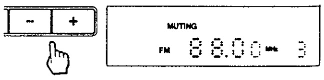
1


BAND
MUTING
FM 87.50 MHz

2


MODE
TUNING • PRESET TIMER
BAND
–
+

3


–
+
MUTING
FM 88.00 MHz 3

SECTION 3
ELECTRICAL ADJUSTMENTS

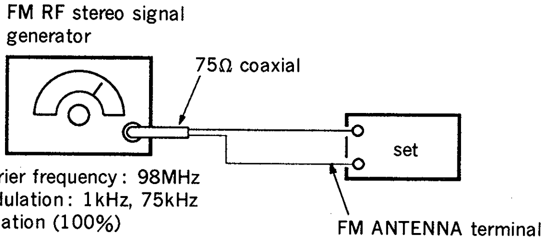
Precautions in Repairing

If the front end unit fails, it is difficult to repair the inner circuits, so replace the entire front end unit.

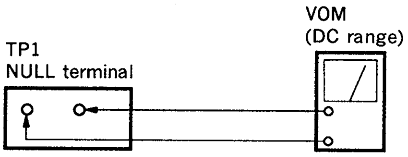
FM SECTION

FM Discriminator Adjustment (NULL Adjustment)

Setting:
BAND: FM


FM RF stereo signal generator
75Ω coaxial
set
FM ANTENNA terminal

Carrier frequency: 98MHz
Modulation: 1kHz, 75kHz deviation (100%)
Output level: 1mV (60dBμ)

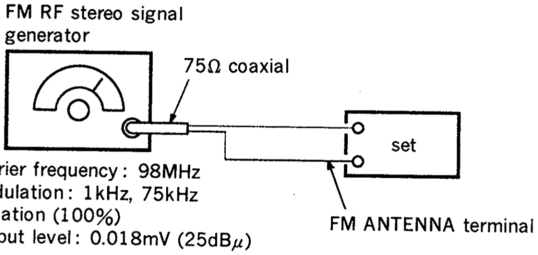

VOM
(DC range)
TP1
NULL terminal

Procedure:
1. Tune the set to 98MHz.
2. Adjust T21 for 0V reading on the VOM.

Note: FM Tuning Level adjustment should be made after FM discriminator alignment.

FM Tuning Level Adjustment

Setting:
BAND: FM

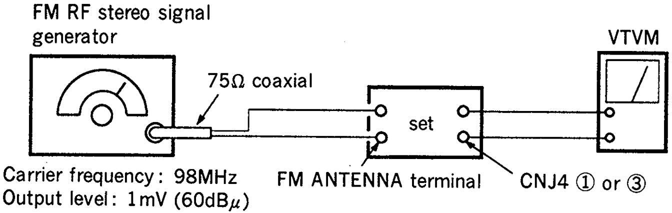

FM RF stereo signal generator
75Ω coaxial
set
FM ANTENNA terminal

Carrier frequency: 98MHz
Modulation: 1kHz, 75kHz deviation (100%)
Output level: 0.018mV (25dBμ)

Procedure:
1. Tune the set to 98MHz.
2. Adjust RV23 so that the TUNED indicator goes on.

FM Stereo Separation Adjustment

Setting:
BAND: FM


FM RF stereo signal generator
VTVM
75Ω coaxial
set
FM ANTENNA terminal
CNJ4 ① or ③

Carrier frequency: 98MHz
Output level: 1mV (60dBμ)
Modulation: L+R 33.75kHz deviation
L−R 33.75kHz deviation
Pilot Signal 19kHz 7.5kHz deviation

Procedure:
Tune the set to 98MHz.

FM stereo Signal generator Output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV21 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV21 for minimum reading.

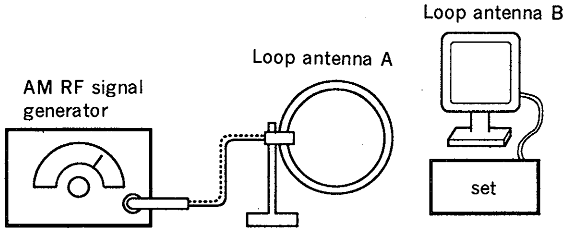
L-CH Stereo separation: Ⓐ—Ⓑ
R-CH Stereo separation: Ⓒ—Ⓓ

The separations of both channels should be equal.

AM SECTION

AM Tuning Level Adjustment

Setting:
BAND: MW


Loop antenna B
Loop antenna A
AM RF signal generator
set

Carrier frequency: 999kHz
30% amplitude modulation by 400Hz signal

Procedure:
1. Set loop antenna A so that the loop antenna B input level becomes 58dBμ/m (0.8m V/m)
2. Tune the set to 999kHz.
3. Adjust the RV22 so that the TUNED indicator goes on.

SW1/SW2 Control Voltage Adjustment (Frequency Coverage Adjustment)

Setting :
BAND : SW

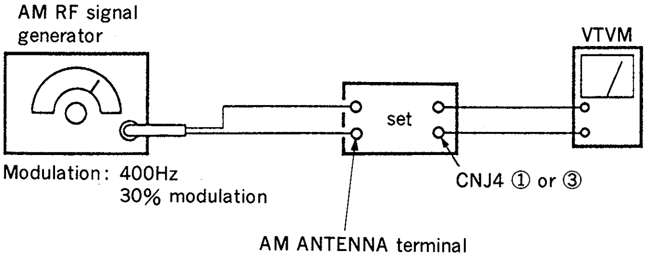
Procedure :

1. Connect digital voltmeter to diode D77 center lead and ground.
2. Adjust for a following value reading on digital voltmeter.

	Set frequency	Adjustment part	Reading on digital voltmeter
SW1	f min. 3.2MHz	T62	1.05V
	f max. 7.3MHz	CT62	8.7V
SW2	f min. 9.5MHz	T64	1.05V
	f max. 21.75MHz	CT64	8.7V

SW1/SW2 Tracking Adjustment

Setting :
BAND : SW

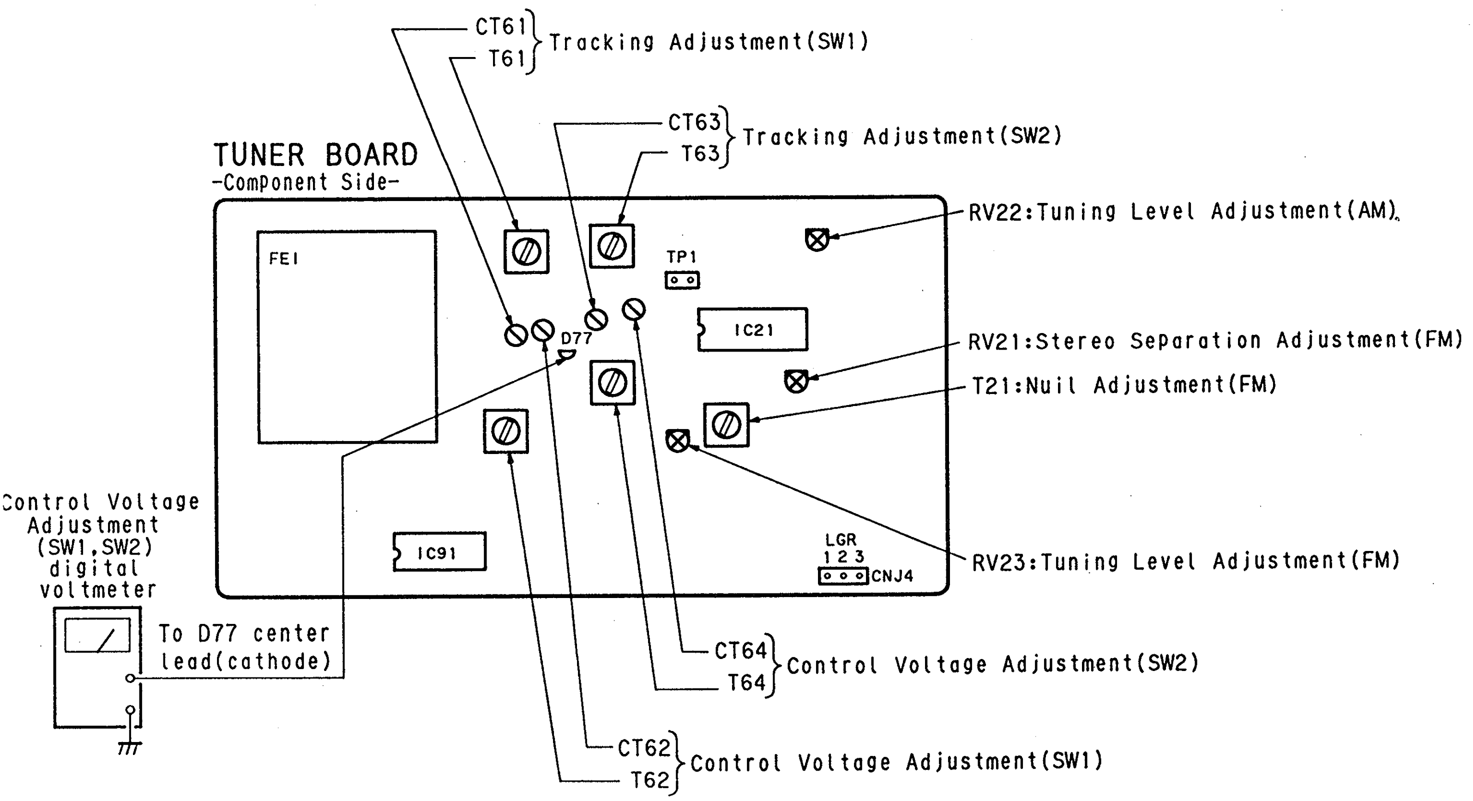

AM RF signal generator
VTVM
set
Modulation : 400Hz
30% modulation
CNJ4 ① or ③
AM ANTENNA terminal

Procedure :
Adjust for a maximun reading on VTVM.

	Set frequency	Adjustment part
SW1	f low. 3.5MHz	T61
	f high. 6.5MHz	CT61
SW2	f low. 10.0MHz	T63
	f high. 20.0MHz	CT63

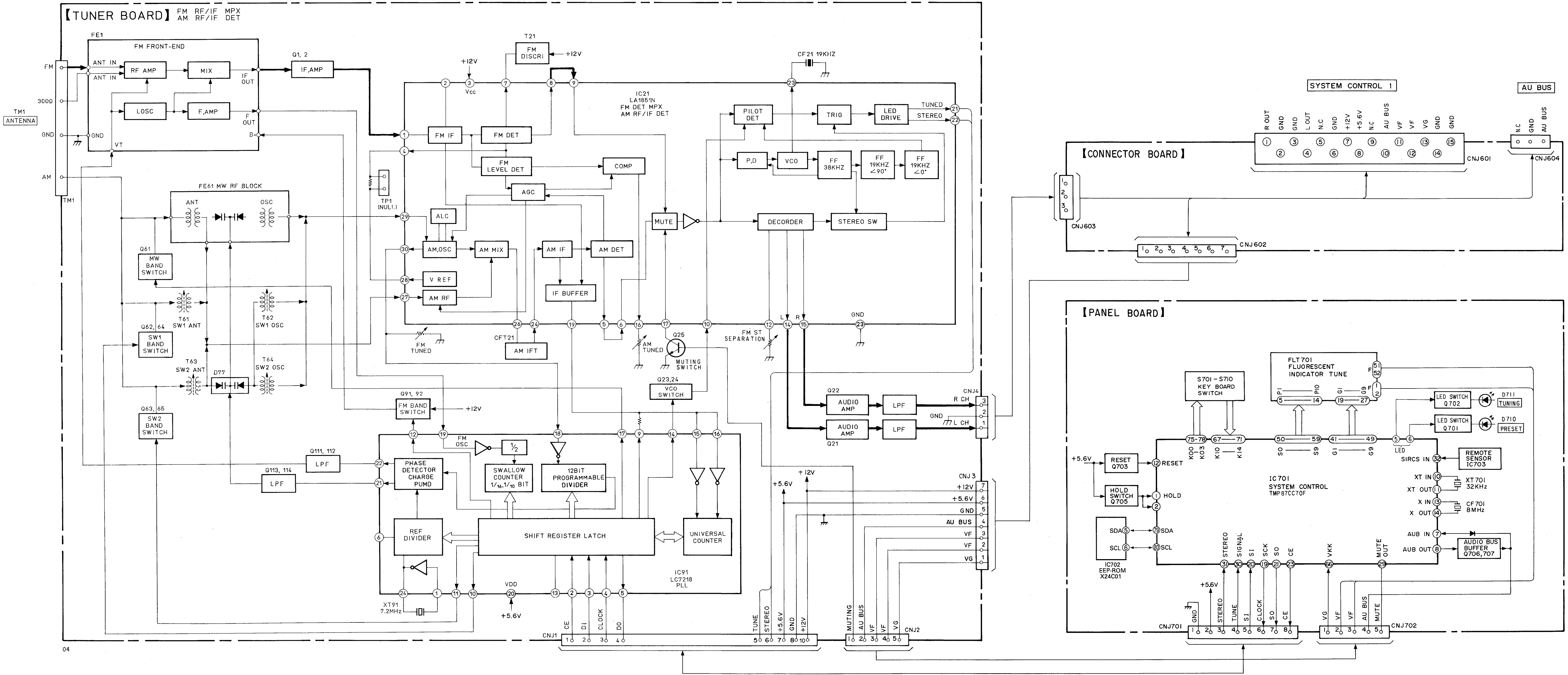
- Repeat the procedures is each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

Adjustment Location :


CT61
T61
Tracking Adjustment(SW1)
CT63
T63
Tracking Adjustment(SW2)
TUNER BOARD
-Component Side-
RV22:Tuning Level Adjustment(AM)
FEI
TP1
IC21
D77
RV21:Stereo Separation Adjustment(FM)
T21:Nuil Adjustment(FM)
Control Voltage Adjustment (SW1,SW2) digital voltmeter
To D77 center lead(cathode)
IC91
LGR
1 2 3
CNJ4
RV23:Tuning Level Adjustment(FM)
CT64
T64
Control Voltage Adjustment(SW2)
CT62
T62
Control Voltage Adjustment(SW1)

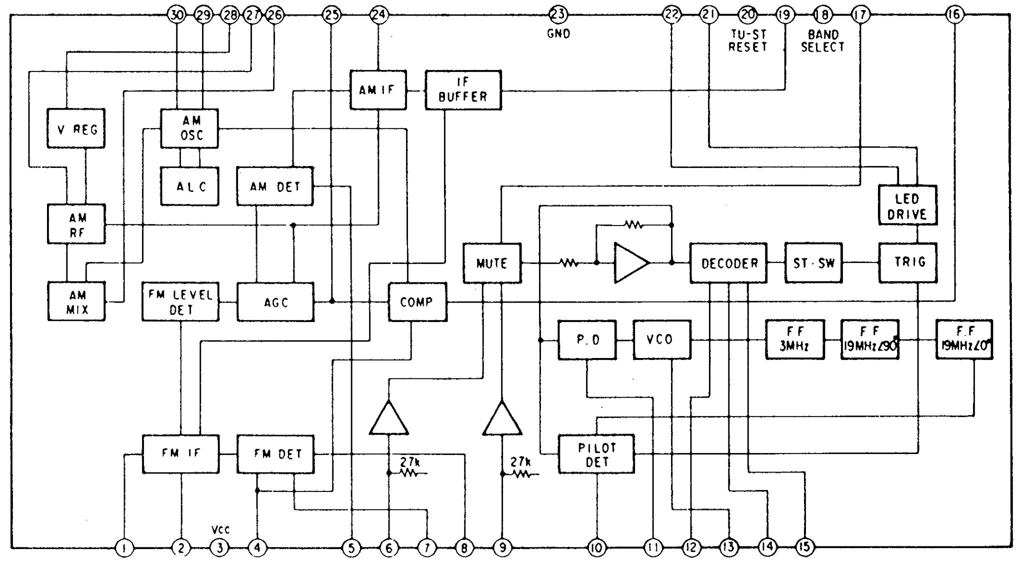
SECTION 4
DIAGRAMS

4-1. BLOCK DIAGRAM

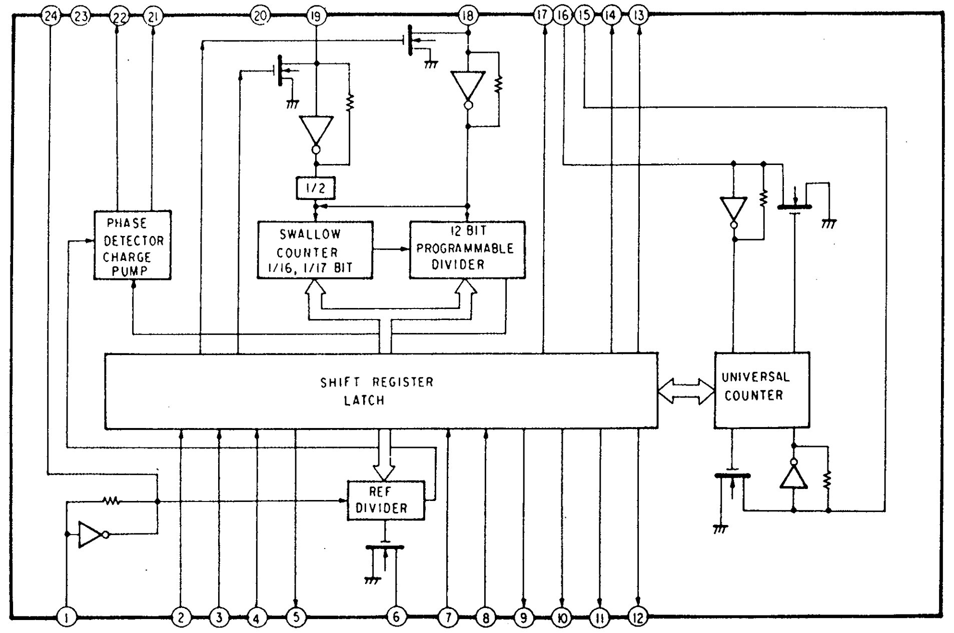

【TUNER BOARD】 FM RF/IF MPX
AM RF/IF DET
FE1
FM FRONT-END
ANT IN
RF AMP
MIX
IF OUT
LOSC
F.AMP
F OUT
B+
VT
GND
FM
300Ω
AM
TM1
ANTENNA
Q1, 2
IF AMP
T21
FM DISCRI
+12V
Vcc
IC21
LA1851N
FM DET MPX
AM RF/IF DET
FM IF
FM DET
FM LEVEL DET
COMP
AGC
ALC
AM,OSC
AM MIX
AM IF
AM DET
IF BUFFER
V REF
AM RF
TP1
(NULL)
FE61 MW RF BLOCK
ANT
OSC
Q61
MW BAND SWITCH
T61
SW1 ANT
T62
SW1 OSC
Q62, 64
SW1 BAND SWITCH
T63
SW2 ANT
D77
T64
SW2 OSC
Q63, 65
SW2 BAND SWITCH
FM TUNED
CFT21
AM IFT
AM TUNED
Q25
MUTING SWITCH
Q23,24
VCO SWITCH
CF21 19KHZ
PILOT DET
TRIG
LED DRIVE
TUNED
STEREO
P.D
VCO
FF 38KHZ
FF 19KHZ ∠90°
FF 19KHZ ∠0°
MUTE
DECORDER
STEREO SW
FM ST SEPARATION
L
R
GND
Q22
AUDIO AMP
LPF
Q21
R CH
L CH
CNJ4
Q91, 92
FM BAND SWITCH
Q111, 112
LPF
Q113, 114
PHASE DETECTOR CHARGE PUMD
FM OSC
1/2
SWALLOW COUNTER 1/16,1/10 BIT
12BIT PROGRAMMABLE DIVIDER
REF DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
IC91
LC7218
PLL
XT91
7.2MHz
VDD
+5.6V
CNJ1
CE
DI
CLOCK
DO
TUNE
STEREO
+5.6V
GND
+12V
CNJ2
MUTING
AU BUS
VF
VF
VG
CNJ3
+12V
+5.6V
GND
AU BUS
VF
VF
VG
04
SYSTEM CONTROL 1
R OUT
GND
GND
L OUT
N.C
GND
+12V
+5.6V
N.C
AU BUS
VF
VF
VG
GND
GND
AU BUS
N.C
GND
AU BUS
【CONNECTOR BOARD】
CNJ601
CNJ604
CNJ603
CNJ602
【PANEL BOARD】
FLT701
FLUORESCENT INDICATOR TUNE
P1
P10
G1
G9
S701 - S710
KEY BOARD SWITCH
LED SWITCH Q702
D711
TUNING
LED SWITCH Q701
D710
PRESET
LED
SIRCS IN
REMOTE SENSOR IC703
XT IN
XT OUT
XT701 32KHz
X IN
X OUT
CF701 8MHz
AUB IN
AUB OUT
AUDIO BUS BUFFER Q706,707
+5.6V
RESET Q703
RESET
HOLD SWITCH Q705
HOLD
IC701
SYSTEM CONTROL
TMP87C70F
K00
K03
K10
K14
S0
S9
G1
G9
SDA
SCL
IC702
EEP-ROM
X24C01
STEREO
SIGNAL
SI
SCK
SO
CE
VKK
MUTE OUT
CNJ701
GND
STEREO
TUNE
SI
CLOCK
SO
CE
CNJ702
VG
VF
VF
AU BUS
MUTE

- **IC Block Diagrams**

IC21 LA1851N


30
29
28
27
26
25
24
23
GND
22
21
20
TU-ST RESET
19
18
BAND SELECT
17
16
V REG
AM OSC
ALC
AM DET
AM IF
IF BUFFER
AM RF
AM MIX
FM LEVEL DET
AGC
COMP
MUTE
DECODER
ST·SW
TRIG
LED DRIVE
P.D
VCO
FF 3MHz
FF 19MHz∠90°
F.F 19MHz∠0°
FM IF
FM DET
27k
27k
PILOT DET
VCC
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

IC81 LC7218


24
23
22
21
20
19
18
17
16
15
14
13
1/2
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTER 1/16, 1/17 BIT
12 BIT PROGRAMMABLE DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
REF DIVIDER
1
2
3
4
5
6
7
8
9
10
11
12

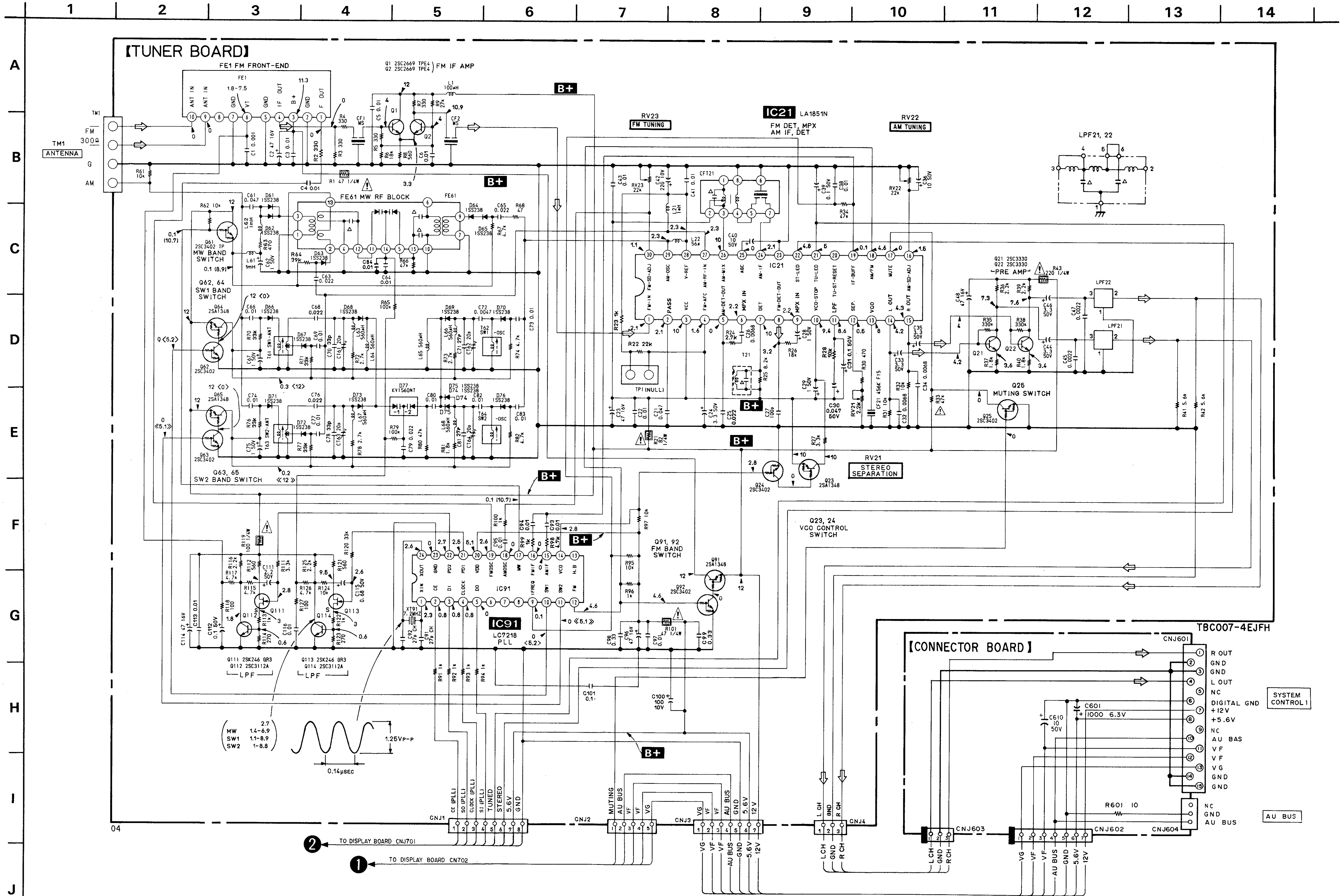
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ⊣▭⊢ : nonflammable resistor.

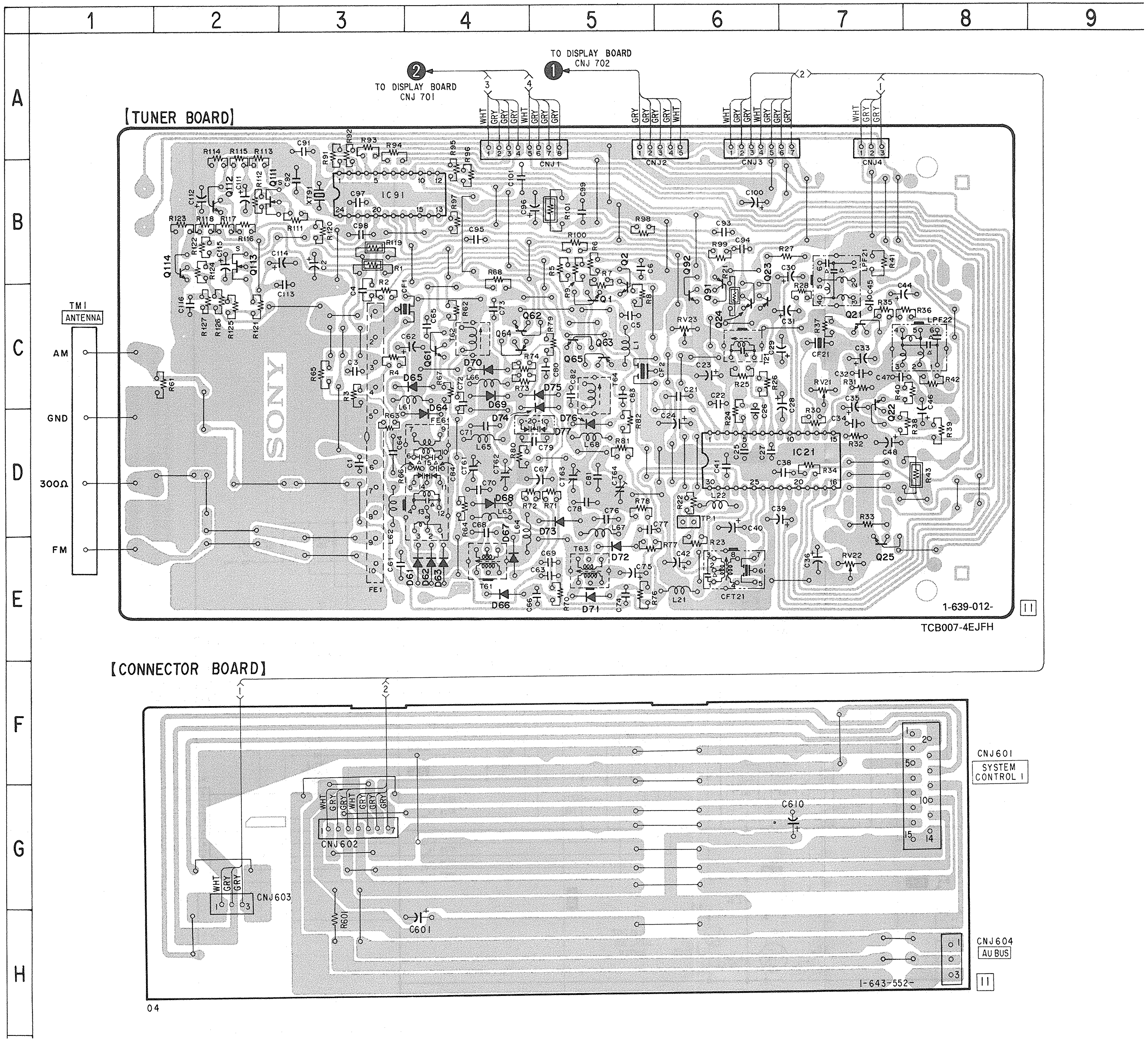
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : MW
  < > : SW
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM

4-2. SCHEMATIC DIAGRAM —TUNER SECTION—


1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
【TUNER BOARD】
FE1 FM FRONT-END
Q1 2SC2669 TPE4
Q2 2SC2669 TPE4
FM IF AMP
B+
TM1
FM 300Ω
AM
TM1 ANTENNA
RV23 FM TUNING
IC21 LA1851N
FM DET, MPX AM IF, DET
RV22 AM TUNING
LPF21, 22
FE61 MW RF BLOCK
Q61 2SC3402 MW BAND SWITCH
Q62, 64 SW1 BAND SWITCH
Q63, 65 SW2 BAND SWITCH
CF121
T21
TP1 (NULL)
R22 22k
Q21 2SC3330
Q22 2SC3330
PRE AMP
LPF22
LPF21
Q25 MUTING SWITCH
RV21 STEREO SEPARATION
Q23, 24 VCO CONTROL SWITCH
Q91, 92 FM BAND SWITCH
IC91 LC7218 PLL
Q111 2SK246 GR3
Q112 2SC3112A
Q113 2SK246 GR3
Q114 2SC3112A
LPF
LPF
MW 1.4~6.9
SW1 1.1~8.9
SW2 1~8.8
1.25Vp-p
0.14μsec
CNJ1
CE (PLL)
DO (PLL)
CLOCK (PLL)
DI (PLL)
TUNED
STEREO
5.6V
GND
CNJ2
MUTING
AU BUS
VF
VG
CNJ3
VG
VF
AU BUS
GND
5.6V
12V
CNJ4
L CH
GND
R CH
04
② TO DISPLAY BOARD CNJ701
① TO DISPLAY BOARD CN702
TBC007-4EJFH
【CONNECTOR BOARD】
CNJ601
R OUT
GND
GND
L OUT
NC
DIGITAL GND
+12V
+5.6V
NC
AU BAS
VF
VF
VG
GND
GND
SYSTEM CONTROL 1
C601 1000 6.3V
C610 10 50V
R601 10
NC
GND
AU BUS
AU BUS
CNJ603
CNJ602
CNJ604
L CH
GND
R CH
VG
VF
VF
AU BUS
GND
5.6V
12V

4-3. PRINTED WIRING BOARDS —TUNER SECTION— ● Refer to page 22 for Semiconductor Lead Layouts.


1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
G
H
[TUNER BOARD]
TO DISPLAY BOARD CNJ 701
TO DISPLAY BOARD CNJ 702
CNJ1
CNJ2
CNJ3
CNJ4
IC91
IC21
SONY
TM1 ANTENNA
AM
GND
300Ω
FM
FE1
CFT21
1-639-012-
11
TCB007-4EJFH
[CONNECTOR BOARD]
CNJ602
CNJ603
C610
C601
R601
CNJ601 SYSTEM CONTROL 1
CNJ604 AU BUS
1-643-552-
11
04

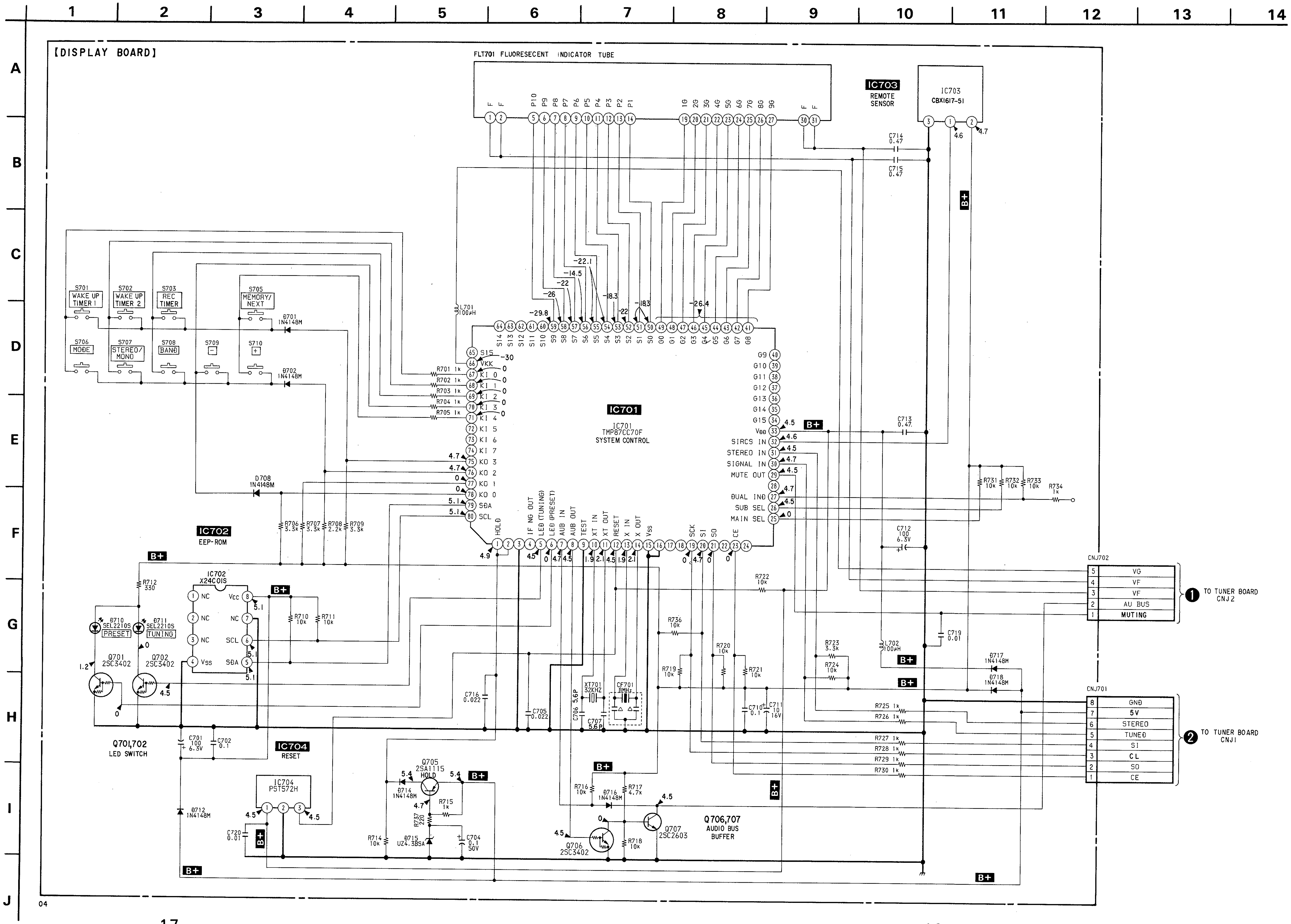
● Semiconductor Location

Ref. No.	Location
D61	E-4
D62	E-4
D63	E-4
D64	D-4
D65	C-4
D66	E-4
D67	E-4
D68	D-4
D69	C-4
D70	C-4
D71	E-5
D72	E-5
D73	D-5
D74	C-5
D75	C-5
D76	D-5
D77	D-5
IC21	D-7
IC91	B-3
Q1	C-5
Q2	B-5
Q21	C-7
Q22	D-7
Q23	C-6
Q24	C-6
Q25	E-7
Q61	C-4
Q62	C-4
Q63	C-5
Q64	C-4
Q65	C-5
Q91	C-6
Q92	B-6
Q111	B-2
Q112	B-2
Q113	B-2
Q114	B-2

Note:

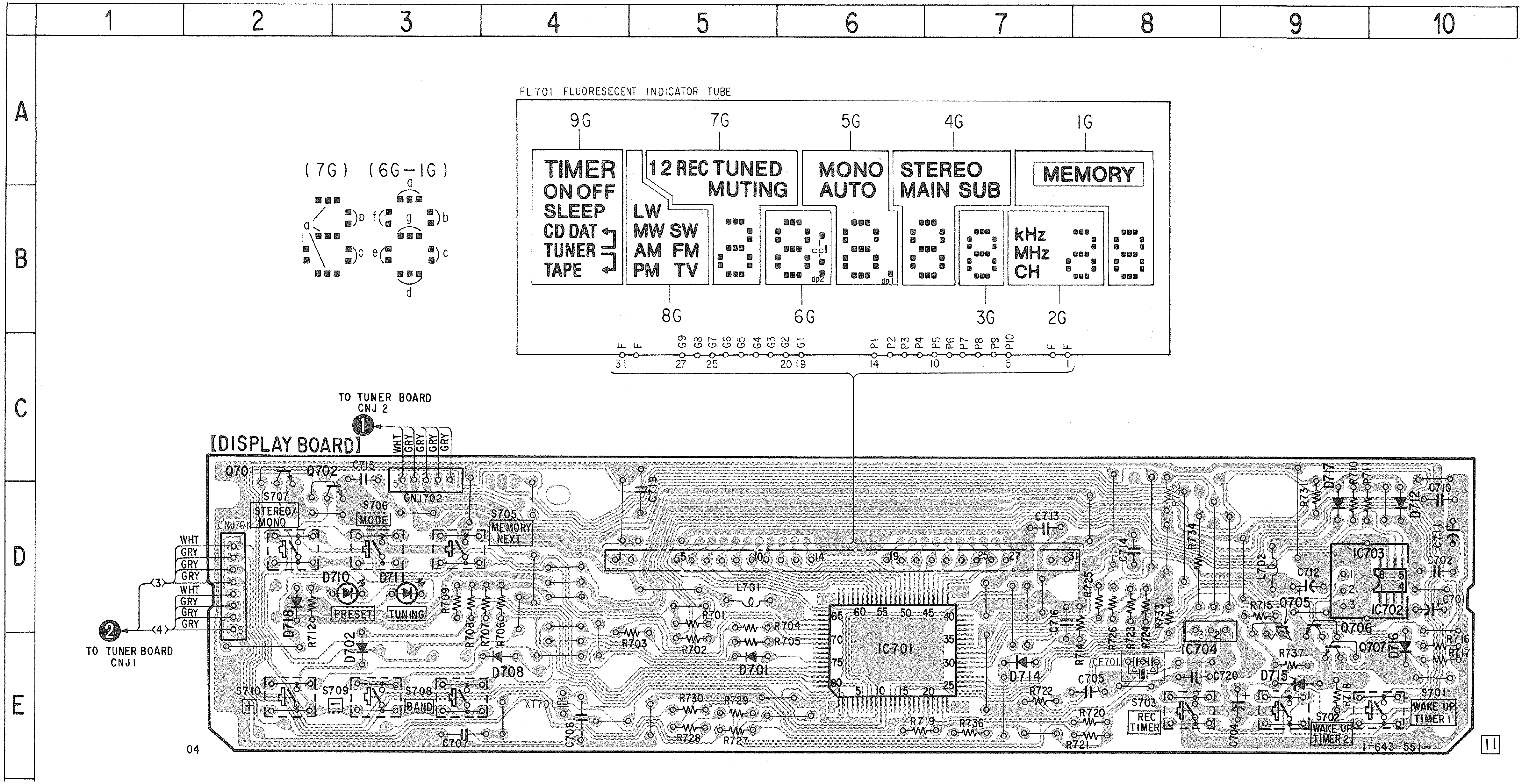
● ○—— : parts extracted from the component side.

4-4. SCHEMATIC DIAGRAM —DISPLAY SECTION—



1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J
[DISPLAY BOARD]
FLT701 FLUORESCENT INDICATOR TUBE
IC703
REMOTE SENSOR
IC703 CBX1617-51
IC701
IC701 TMP87CC70F SYSTEM CONTROL
IC702
EEP-ROM
IC702 X24C01S
IC704
RESET
IC704 PST572H
S701 WAKE UP TIMER 1
S702 WAKE UP TIMER 2
S703 REC TIMER
S705 MEMORY/NEXT
S706 MODE
S707 STEREO/MONO
S708 BAND
S709 −
S710 +
D710 SEL2210S PRESET
D711 SEL2210S TUNING
Q701 2SC3402
Q702 2SC3402
Q701,702 LED SWITCH
Q705 2SA1115 HOLD
D714 1N4148M
D715 UZ4.3BSA
Q706 2SC3402
Q707 2SC2603
Q706,707 AUDIO BUS BUFFER
XT701 32KHZ
CF701 8MHz
CNJ702
VG
VF
VF
AU BUS
MUTING
TO TUNER BOARD CNJ2
CNJ701
GND
5V
STEREO
TUNED
SI
CL
SO
CE
TO TUNER BOARD CNJ1
B+
04

4-5. PRINTED WIRING BOARD —DISPLAY SECTION— ● Refer to page 22 for Semiconductor Lead Layouts.


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
FL701 FLUORESECENT INDICATOR TUBE
9G
7G
5G
4G
1G
8G
6G
3G
2G
(7G)
(6G−1G)
a
b
c
d
e
f
g
TIMER
ON OFF
SLEEP
CD DAT
TUNER
TAPE
12 REC TUNED
MUTING
LW
MW SW
AM FM
PM TV
MONO
AUTO
STEREO
MAIN SUB
MEMORY
kHz
MHz
CH
col
dp2
dp1
F F G9 G8 G7 G6 G5 G4 G3 G2 G1 P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 F F
31 27 25 20 19 14 10 5 1
TO TUNER BOARD
CNJ 2
①
[DISPLAY BOARD]
WHT GRY GRY GRY GRY
②
TO TUNER BOARD
CNJ1
WHT
GRY
GRY
GRY
WHT
GRY
GRY
GRY
<3>
<4>
CNJ701
CNJ702
Q701
Q702
C715
S707
STEREO/ MONO
S706
MODE
S705
MEMORY NEXT
D710
D711
PRESET
TUNING
D718
R712
D702
R709
R708
R707
R706
D708
C719
L701
R701
R703
R702
R704
R705
D701
IC701
C713
C714
R734
R725
R726
R723
R724
R733
C716
R714
D714
CF701
R722
C705
R720
R721
R719
R736
R730
R729
R728
R727
C706
C707
XT701
S710
S709
S708
BAND
IC704
C720
R737
D715
S703
REC TIMER
C704
S702
WAKE UP TIMER 2
R718
S701
WAKE UP TIMER 1
L702
C712
R715
Q705
Q706
Q707
D716
R716
R717
IC703
IC702
C702
C701
C711
C710
D712
D717
R731
R732
R710
R711
1-643-551-
04
11

● Semiconductor Location

Ref. No.	Location
D701	E-5
D702	E-3
D708	E-4
D710	D-3
D711	D-3
D712	D-10
D714	E-7
D715	E-9
D716	E-10
D717	D-9
D718	D-2
IC701	E-6
IC702	D-10
IC703	D-9
IC704	E-8
Q701	C-2
Q702	C-2
Q705	D-9
Q706	D-9
Q707	E-9

Note on Printed Wiring Board:

- ○—— : parts extracted from the component side.

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.

4-6. PIN DESCRIPTION

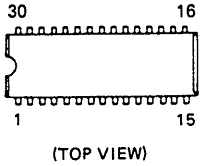
• IC701 System Controller (TMP87CC70F-6021)

The terminals work to control tuner section (IC21, 81), FL tube display and reading and writing of IC702 (preset data), etc. according to key input and signal from the remote controller.

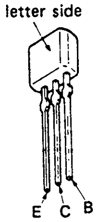
PIN No.	PIN NAME	I/O	ACTIVE	PIN FUNCTION
1	HOLD	I	↓	HOLD detecting interrupt terminal
2	HOLD RESET	I	↑	HOLD resetting interrupt terminal
3		I		Not in use
4	IF NGOUT	O	H	IF count NG output
5	LED1	O	H	TUNING LED ON
6	LED2	O	H	PRESET LED ON
7	AUB IN	I	L	AUDIO BUS input
8	AUB OUT	O	L	AUDIO BUS output
9	TEST	I	H	Test terminal
10	XT IN	I		Low frequency oscillator connection terminal (32KHz)
11	XT OUT	O		Low frequency oscillator connection terminal (32KHz)
12	RESET	I	L	Reset signal input
13	X IN	I		High frequency oscillator connection terminal (8MHz)
14	X OUT	O		High frequency oscillator connection terminal (8MHz)
15	VSS			GND
16		I		Not in use
17, 18		O		Not in use
19	SCK	O		PLL serial clock output
20	SI	I		PLL serial data input
21	SO	O		PLL serial data output
22				Not in use
23	CE	O	H	PLL chip enable
24				Not in use
25	MAIN SEL	O	L	Main sound selection terminal (Not in use)
26	SUB SEL	O	L	Sub sound selection terminal (Not in use)
27	DUAL IND	I	L	Sound dual signal detection terminal (Not in use)
28				Not in use
29	MUTE OUT	O	L	MUTING output
30	SIGNAL IN	I	L	TUNED input
31	STEREO IN	I	L	STEREO input
32	SIRCS IN	I	L	SIRCS input
33	VDD			+5V
34 - 40		O		Not in use
41 - 49	G0 - G8	O	H	FL tube digit output
50 - 59	S0 - S9	O	H	FL tube segment output
60 - 65		O	H	Not in use
66	VKK			FL tube driving power supply
67 - 71	KI0 - KI4	I	H	Key input
72		I		Not in use
73, 74				Not in use
75 - 78	KO0 - KO3	O	H	Key output
79	SDA	I/O		Data input/output for EEPROM
80	SCL	O		Clock output for EEPROM

4-7. SEMICONDUCTOR LEAD LAYOUTS

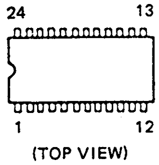
LA1851N


30
16
1
15
(TOP VIEW)

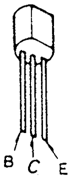
2SA1175-HFE


letter side
E
C
B

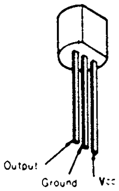
LC7218


24
13
1
12
(TOP VIEW)

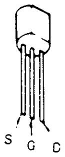
2SC3330-T



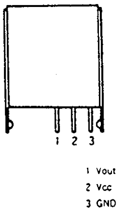
PST572H


Output
Ground
Vcc

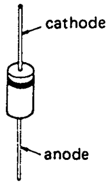
2SK246-GR3



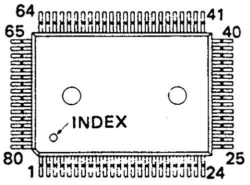
SBX1617-51


1
2
3
1 Vout
2 Vcc
3 GND

UZ-4.3BSA
1N4148M

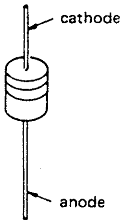

cathode
anode

TMP87CC70F-6021

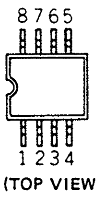

64
41
65
40
INDEX
80
25
1
24

MARKING SIDE VIEW

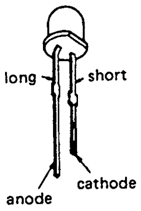
1SS168


cathode
anode

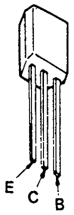
X24C01S


8 7 6 5
1 2 3 4
(TOP VIEW)

SEL2210S


long
short
anode
cathode

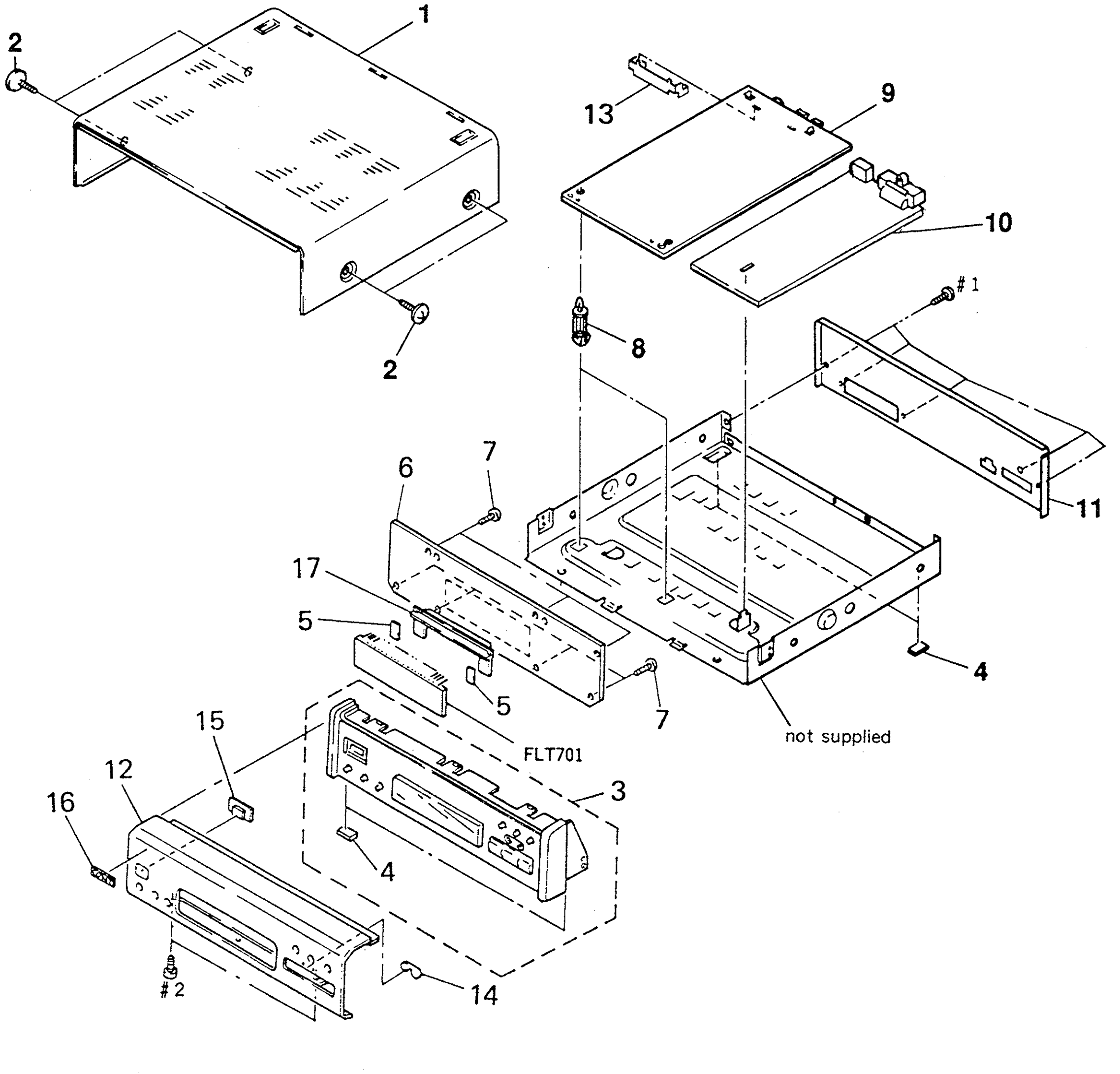
DTA114ES
DTC114ES
2S2603-EF
2SC2669-0Y
2SC3113-AB



SECTION 5
EXPLODED VIEW

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts Example :
  KNOB, BALANCE (WHITE)... (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Hardware (# mark) list is given in the last of this parts list.



Ref. No.	Part No.	Description	Remark
1	4-932-844-11	CASE	
2	3-363-099-01	SCREW (CASE +3X8 TP2)	
3	X-4942-536-1	PANEL (H) ASSY, FRONT	
4	4-930-336-21	FOOT (FELT)	
* 5	4-932-810-11	CUSHION (FL)	
* 6	A-4345-975-A	DISPLAY BOARD, COMPLETE	
7	4-951-620-01	SCREW (2.6X8), +BVTP	
* 8	4-914-008-01	HOLDER, PCB	
* 9	A-4303-370-A	TUNER BOARD, COMPLETE (TCB007-4EJFH)	
* 10	1-643-552-11	CONNECTOR BOARD	
* 11	4-948-730-31	PANEL (EXP), BACK	
12	4-950-911-11	PANEL (ST), FRONT	
* 13	4-924-988-11	PLATE (ST), GROUND	
14	4-944-427-01	INDICATOR	
15	4-944-425-01	FILTER	
16	4-942-636-01	EMBLEM (NO. 3.5), SONY	
* 17	4-944-444-01	HOLDER (FL TUBE)	
FLT701	1-519-709-11	INDICATOR TUBE, FLUORESCENT	

TUNER

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA ..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-4303-370-A	TUNER BOARD, COMPLETE (TCB007-4EJFH) ************************************			
*	4-924-988-11	PLATE (ST), GROUND			
		< CAPACITOR >			
C1	1-162-294-11	CERAMIC CHIP	0.001uF	20%	25V
C2	1-124-119-00	ELECT	330uF	20%	16V
C3	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C4	1-162-294-31	CERAMIC CHIP	0.001uF	20%	25V
C5	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C6	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C7	1-102-942-00	CERAMIC	5pF	0.5pF	50V
C21	1-101-006-00	CERAMIC	0.047uF		50V
C22	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C23	1-124-477-11	ELECT	47uF	20%	25V
C24	1-123-382-00	ELECT	3.3uF	20%	100V
C25	1-163-063-00	CERAMIC MELF	0.022uF		25V
C26	1-163-019-00	CERAMIC CHIP	0.0068uF	20%	12V
C27	1-162-516-11	CERAMIC CHIP	100pF	10%	50V
C28	1-124-903-11	ELECT	1.0uF	20%	50V
C29	1-124-903-11	ELECT	1.0uF	20%	50V
C30	1-124-902-00	ELECT	0.47uF	20%	50V
C31	1-124-463-00	ELECT	0.1uF	20%	50V
C32	1-130-481-00	CERAMIC CHIP	0.0068uF	20%	12V
C33	1-123-382-00	ELECT	3.3uF	20%	50V
C34	1-130-481-00	CERAMIC CHIP	0.0068uF	20%	12V
C35	1-123-382-00	ELECT	3.3uF	20%	50V
C36	1-124-907-11	ELECT	10uF	20%	50V
C38	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C39	1-124-463-00	ELECT	0.1uF	20%	50V
C40	1-124-907-11	ELECT	10uF	20%	50V
C41	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C42	1-126-176-11	ELECT	220uF	20%	10V
C43	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C44	1-123-382-00	ELECT	3.3uF	20%	100V
C45	1-161-375-00	CERAMIC CHIP	0.0022uF	20%	25V
C46	1-123-382-00	ELECT	3.3uF	20%	50V
C47	1-161-375-00	CERAMIC CHIP	0.0022uF	20%	25V
C48	1-124-477-11	ELECT	47uF	20%	16V
C61	1-101-006-00	CERAMIC CHIP	0.47uF		50V
C62	1-124-903-11	ELECT	1.0uF	20%	50V
C63	1-163-063-00	CERAMIC CHIP	0.022uF		25V
C64	1-161-379-00	CERAMIC	0.01uF	30%	16V
C65	1-163-063-00	CERAMIC CHIP	0.022uF		25V
C66	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C67	1-124-903-11	ELECT	0.1uF	20%	50V
C68	1-101-005-00	CERAMIC	0.022uF		50V
C69	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C70	1-102-963-00	CERAMIC	33pF	5%	50V
C71	1-102-961-00	CERAMIC	27pF	5%	50V
C72	1-163-017-00	CERAMIC CHIP	0.047uF	20%	12V
C73	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C74	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C75	1-124-903-11	ELECT	0.1uF	20%	50V
C76	1-101-005-00	CERAMIC	0.022uF		50V
C77	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C78	1-102-963-00	CERAMIC	33pF	5%	50V
C79	1-101-005-00	CERAMIC	0.022uF		50V
C80	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C81	1-102-961-00	CERAMIC	27pF	5%	50V
C82	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C83	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C84	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C91	1-102-961-00	CERAMIC	27pF	5%	50V
C92	1-102-961-00	CERAMIC	27pF	5%	50V
C93	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C94	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C95	1-163-095-00	CERAMIC MELF	0.01uF	20%	16V
C96	1-124-477-11	ELECT	47uF	20%	16V
C97	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C98	1-163-171-00	CERAMIC MELF	0.33uF	5%	50V
C99	1-163-171-00	CERAMIC MELF	0.33uF	5%	50V
C100	1-124-443-00	ELECT	100uF	20%	10V
C101	1-164-159-11	CERAMIC	0.1uF		50V
C111	1-124-257-00	ELECT	2.2uF	20%	50V
C112	1-124-463-00	ELECT	0.1uF	20%	50V
C113	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C114	1-124-477-11	ELECT	47uF	20%	16V
C115	1-124-254-00	ELECT	0.68uF	20%	50V

Ref. No.	Part No.	Description	Remark
C116	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
		< FILTER >	
CF1	1-567-389-11	FILTER, CERAMIC	
CF2	1-567-389-11	FILTER, CERAMIC	
		< OSCILLATOR >	
CF21	1-577-075-11	OSCILLATOR, CERAMIC	
		< IF TRANSFORMER >	
CFT21	1-404-853-11	TRANSFORMER, IF (CERAMIC FILTER)	
		< CONECTOR >	
* CNJ1	1-564-342-11	SOCKET, CONNECTOR 8P	
* CNJ2	1-564-339-00	PIN, CONNECTOR 5P	
* CNJ3	1-564-341-11	PIN, CONNECTOR 7P	
* CNJ4	1-564-337-00	PIN, CONNECTOR 3P	
		< TRIMMER >	
CT61	1-141-227-00	CAP, TRIMMER	
CT62	1-141-227-00	CAP, TRIMMER	
CT63	1-141-227-00	CAP, TRIMMER	
CT64	1-141-227-00	CAP, TRIMMER	
		< DIODE >	
D61	8-719-903-27	DIODE 1SS168	
D62	8-719-903-27	DIODE 1SS168	
D63	8-719-903-27	DIODE 1SS168	
D64	8-719-903-27	DIODE 1SS168	
D65	8-719-903-27	DIODE 1SS168	
D66	8-719-903-27	DIODE 1SS168	
D67	8-719-903-27	DIODE 1SS168	
D68	8-719-903-27	DIODE 1SS168	
D69	8-719-903-27	DIODE 1SS168	
D70	8-719-903-27	DIODE 1SS168	
D71	8-719-903-27	DIODE 1SS168	
D72	8-719-903-27	DIODE 1SS168	
D73	8-719-903-27	DIODE 1SS168	
D74	8-719-903-27	DIODE 1SS168	
D75	8-719-903-27	DIODE 1SS168	
D76	8-719-903-27	DIODE 1SS168	
D77	8-719-903-27	DIODE 1SS168	
		< FM FRONT END >	
FE1	1-463-862-21	FRONT END, FM	
		< ENCAPSULATED COMPONENT >	
FE61	1-236-514-11	ENCAPSULATED COMPONENT	
		< IC >	
IC21	8-759-821-45	IC LA1851N	
IC91	8-759-820-91	IC LC7218	
		< INDUCTOR >	
L1	1-410-521-11	MICRO INDUCTOR 100uH	
L21	1-410-171-11	MICRO INDUCTOR 1mH	
L22	1-410-518-41	MICRO INDUCTOR 56uH	
L61	1-410-171-11	MICRO INDUCTOR 1mH	
L62	1-410-171-11	MICRO INDUCTOR 1mH	
L63	1-410-624-11	MICRO INDUCTOR 560uH	
L64	1-410-624-11	MICRO INDUCTOR 560uH	
L65	1-410-624-11	MICRO INDUCTOR 560uH	
L66	1-410-624-11	MICRO INDUCTOR 560uH	
L67	1-410-624-11	MICRO INDUCTOR 560uH	
L68	1-410-624-11	MICRO INDUCTOR 560uH	
		< LOW PASS FILTER >	
LPF21	1-235-164-00	FILTER, LOW PASS	
LPF22	1-235-164-00	FILTER, LOW PASS	
		< TRANSISTOR >	
Q1	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q2	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q21	8-729-820-24	TRANSISTOR 2SC3330-T	
Q22	8-729-820-24	TRANSISTOR 2SC3330-T	
Q23	8-729-900-61	TRANSISTOR DTA114ES	
Q24	8-729-900-80	TRANSISTOR DTC114ES	
Q25	8-729-900-80	TRANSISTOR DTC114ES	
Q61	8-729-900-80	TRANSISTOR DTC114ES	
Q62	8-729-900-80	TRANSISTOR DTC114ES	
Q63	8-729-900-80	TRANSISTOR DTC114ES	
Q64	8-729-900-61	TRANSISTOR DTA114ES	
Q65	8-729-900-61	TRANSISTOR DTA114ES	
Q91	8-729-900-61	TRANSISTOR DTA114ES	
Q92	8-729-900-80	TRANSISTOR DTC114ES	
Q111	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q112	8-729-230-93	TRANSISTOR 2SC3113-AB	
Q113	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q114	8-729-230-93	TRANSISTOR 2SC3113-AB	
		< RESISTOR >	
⚠R1	1-249-401-11	CARBON (SMALL) 47 5% 1/4W F	
R2	1-249-329-11	CARBON MELF 330 5% 1/8W	

The components identified by
mark ⚠ or dotted line with mark
⚠ are critical for safety.
Replace only with part number
specified.

TUNER

Ref. No.	Part No.	Description	Remark
R3	1-249-329-11	CARBON MELF 330 5% 1/8W	
R4	1-249-329-11	CARBON MELF 330 5% 1/8W	
R5	1-249-329-11	CARBON MELF 330 5% 1/8W	
R6	1-249-350-11	CARBON MELF 18K 5% 1/8W	
R7	1-249-329-11	CARBON MELF 330 5% 1/8W	
R8	1-249-332-11	CARBON MELF 560 5% 1/8W	
R9	1-249-352-11	CARBON MELF 27K 5% 1/8W	
⚠R21	1-249-404-00	CARBON (SMALL) 82 5% 1/4W	F
R22	1-249-433-11	CARBON (SMALL) 22K 5% 1/4W	
R23	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R24	1-249-340-11	CARBON MELF 2.7K 5% 1/8W	
R25	1-249-346-11	CARBON MELF 8.2K 5% 1/8W	
R26	1-249-350-11	CARBON MELF 18K 5% 1/8W	
R27	1-249-423-11	CARBON (SMALL) 3.3K 5% 1/4W	
R28	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R30	1-249-331-11	CARBON MELF 470 5% 1/8W	
R31	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R32	1-249-347-11	CARBON MELF 10K 5% 1/8W	
⚠R33	1-249-437-11	CARBON (SMALL) 47K 5% 1/4W	F
R34	1-249-355-11	CARBON MELF 47K 5% 1/8W	
R35	1-249-365-11	CARBON MELF 330 5% 1/8W	
R36	1-249-339-11	CARBON MELF 2.2K 5% 1/8W	
R37	1-249-338-11	CARBON MELF 1.8K 5% 1/8W	
R38	1-249-365-11	CARBON MELF 330 5% 1/8W	
R39	1-249-339-11	CARBON MELF 2.2K 5% 1/8W	
R40	1-249-338-11	CARBON MELF 1.8K 5% 1/8W	
R41	1-249-344-11	CARBON MELF 5.6K 5% 1/8W	
R42	1-249-344-11	CARBON MELF 5.6K 5% 1/8W	
⚠R43	1-249-409-11	CARBON (SMALL) 220 5% 1/4W	F
R61	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R62	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R63	1-249-331-11	CARBON MELF 470 5% 1/8W	
R64	1-249-354-11	CARBON MELF 39K 5% 1/8W	
R65	1-249-359-11	CARBON MELF 100K 5% 1/8W	
R66	1-249-355-11	CARBON MELF 47K 5% 1/8W	
R67	1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R68	1-249-319-11	CARBON MELF 47 5% 1/8W	
R70	1-249-353-11	CARBON MELF 33K 5% 1/8W	
R71	1-249-353-11	CARBON MELF 33K 5% 1/8W	
R72	1-249-340-11	CARBON MELF 2.7K 5% 1/8W	
R73	1-249-340-11	CARBON MELF 2.7K 5% 1/8W	
R74	1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R76	1-249-353-11	CARBON MELF 33K 5% 1/8W	
R77	1-249-353-11	CARBON MELF 33K 5% 1/8W	
R78	1-249-340-11	CARBON MELF 2.7K 5% 1/8W	
R79	1-249-359-11	CARBON MELF 100K 5% 1/8W	
R80	1-249-355-11	CARBON MELF 47K 5% 1/8W	
R81	1-249-338-11	CARBON MELF 1.8K 5% 1/8W	
R82	1-249-343-11	CARBON MELF 4.7K 5% 1/8W	

Ref. No.	Part No.	Description	Remark
R91	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R92	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R93	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R94	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R95	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R96	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R97	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R98	1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R99	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R100	1-249-335-11	CARBON MELF 1K 5% 1/8W	
⚠R101	1-249-401-11	CARBON (SMALL) 47 5% 1/4W	F
R111	1-249-341-11	CARBON MELF 3.3K 5% 1/8W	
R112	1-249-332-11	CARBON MELF 560 5% 1/8W	
R113	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R114	1-249-328-11	CARBON MELF 270 5% 1/8W	
R115	1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R116	1-249-339-11	CARBON MELF 2.2K 5% 1/8W	
R117	1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R118	1-249-323-11	CARBON MELF 100 5% 1/8W	
⚠R119	1-249-405-11	CARBON (SMALL) 100 5% 1/4W	F
R120	1-249-353-11	CARBON MELF 33K 5% 1/8W	
R121	1-249-332-11	CARBON MELF 560 5% 1/8W	
R122	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R123	1-249-328-11	CARBON MELF 270 5% 1/8W	
R124	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R125	1-249-339-11	CARBON MELF 2.2K 5% 1/8W	
R126	1-249-343-11	CARBON MELF 4.7K 5% 1/8W	
R127	1-249-323-11	CARBON MELF 100 5% 1/8W	
		< VARIABLE RESISTOR >	
RV21	1-238-598-11	RES, ADJ, CARBON 2.2K	
RV22	1-238-601-11	RES, ADJ, CARBON 22K	
RV23	1-238-601-11	RES, ADJ, CARBON 22K	
		< TRANSFORMER >	
T21	1-404-807-11	TRANSFORMER, DISCRIMINATOR	
T61	1-402-447-11	COIL (ANT SW 1)	
T62	1-406-354-11	COIL (OSC SW 1)	
T63	1-402-448-11	COIL (ANT SW 2)	
T64	1-406-346-11	COIL (OSC SW 2)	
		< TERMINAL >	
* TM1	1-537-238-21	TERMINAL BOARD (ANTENNA)	
		< CONNECTOR PIN >	
* TP1	1-560-060-00	PIN, CONNECTOR 2P	

The components identified by
mark ⚠ or dotted line with mark.
⚠ are critical for safety.
Replace only with part number
specified.

< CRYSTAL VIBRATOR >

Ref. No.	Part No.	Description	Remark
XT91	1-577-126-11	VIBRATOR, CRYSTAL (7.2MHz)	

****

Ref. No.	Part No.	Description	Remark
*	A-4345-975-A	DISPLAY BOARD, COMPLETE ***********************	
*	1-643-552-11	CONNECTOR BOARD ***************	
*	4-932-810-11	CUSHION (FL)	
*	4-944-444-01	HOLDER (FL TUBE)	

< CAPACITOR >

Ref. No.	Part No.	Description			
C601	1-124-471-00	ELECT	1000uF	20%	6.3V
C610	1-124-907-11	ELECT	10uF	20%	50V
C701	1-126-177-11	ELECT	100uF	20%	10V
C702	1-164-159-11	CERAMIC	0.1uF		50V
C704	1-124-463-00	ELECT	0.1uF	20%	50V
C705	1-161-494-00	CERAMIC	0.022uF		25V
C706	1-162-196-31	CERAMIC	5.6PF	10%	50V
C707	1-162-196-31	CERAMIC	5.6PF	10%	50V
C710	1-164-159-11	CERAMIC	0.1uF		50V
C711	1-126-157-11	ELECT	10uF	20%	16V
C712	1-126-177-11	ELECT	100uF	20%	10V
C713	1-136-173-00	FILM	0.47uF	5%	50V
C714	1-136-173-00	FILM	0.47uF	5%	50V
C715	1-136-173-00	FILM	0.47uF	5%	50V
C716	1-161-494-00	CERAMIC	0.022uF		25V
C719	1-162-306-11	CERAMIC	0.01uF	20%	16V
C720	1-162-306-11	CERAMIC	0.01uF	20%	16V

< VIBRATOR >

Ref. No.	Part No.	Description
CF701	1-579-125-11	VIBRATOR, CERAMIC (8MHz)

< CONNECTOR >

Ref. No.	Part No.	Description
* CNJ601	1-566-859-11	SOCKET, CONNECTOR 15P (SYSTEM CONTROL 1)
* CNJ602	1-564-341-11	PIN, CONNECTOR 7P
* CNJ603	1-564-337-00	PIN, CONNECTOR 3P
* CNJ604	1-565-561-11	PIN, CONNECTOR 3P (AU BUS)
* CNJ701	1-564-342-11	PIN, CONNECTOR 8P
* CNJ702	1-564-339-00	PIN, CONNECTOR 5P

< DIODE >

Ref. No.	Part No.	Description	
D701	8-719-987-63	DIODE	1N4148M
D702	8-719-987-63	DIODE	1N4148M
D708	8-719-987-63	DIODE	1N4148M
D710	8-719-301-39	LED	SEL2210S (PRE SET)
D711	8-719-301-39	LED	SEL2210S (TUNING)
D712	8-719-987-63	DIODE	1N4148M
D714	8-719-987-63	DIODE	1N4148M
D715	8-719-010-28	DIODE	UZ-4.3BSA
D716	8-719-987-63	DIODE	1N4148M
D717	8-719-987-63	DIODE	1N4148M
D718	8-719-987-63	DIODE	1N4148M

< FLUORESCENT INDICATOR >

Ref. No.	Part No.	Description
FLT701	1-519-709-11	INDICATOR TUBE, FLUORESCENT

< IC >

Ref. No.	Part No.	Description	
IC701	8-759-059-85	IC	TMP87CC70F-6021
IC702	8-759-504-12	IC	X24C01S
IC703	8-741-100-61	IC	SBX1617-51
IC704	8-759-515-58	IC	PST572H

< COIL >

Ref. No.	Part No.	Description	
L701	1-410-521-11	INDUCTOR	100uH
L702	1-410-521-11	INDUCTOR	100uH

< TRANSISTOR >

Ref. No.	Part No.	Description	
Q701	8-729-900-80	TRANSISTOR	DTC114ES
Q702	8-729-900-80	TRANSISTOR	DTC114ES
Q705	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q706	8-729-900-80	TRANSISTOR	DTC114ES
Q707	8-729-620-05	TRANSISTOR	2SC2603-EF

< RESISTOR >

Ref. No.	Part No.	Description			
R601	1-249-393-11	CARBON	10	5%	1/4W
R701	1-249-417-11	CARBON	1K	5%	1/4W
R702	1-249-417-11	CARBON	1K	5%	1/4W
R703	1-249-417-11	CARBON	1K	5%	1/4W
R704	1-249-417-11	CARBON	1K	5%	1/4W
R705	1-249-417-11	CARBON	1K	5%	1/4W
R706	1-249-423-11	CARBON	3.3K	5%	1/4W
R707	1-249-423-11	CARBON	3.3K	5%	1/4W
R708	1-249-421-11	CARBON	2.2K	5%	1/4W
R709	1-249-423-11	CARBON	3.3K	5%	1/4W
R710	1-249-429-11	CARBON	10K	5%	1/4W
R711	1-249-429-11	CARBON	10K	5%	1/4W
R712	1-249-411-11	CARBON	330	5%	1/4W
R714	1-249-429-11	CARBON	10K	5%	1/4W
R715	1-249-417-11	CARBON	1K	5%	1/4W
R716	1-249-429-11	CARBON	10K	5%	1/4W
R717	1-249-425-11	CARBON	4.7K	5%	1/4W
R718	1-249-429-11	CARBON	10K	5%	1/4W
R719	1-249-429-11	CARBON	10K	5%	1/4W
R720	1-249-429-11	CARBON	10K	5%	1/4W

DISPLAY CONNECTOR

Ref. No.	Part No.	Description	Remark
R721	1-249-429-11	CARBON 10K 5% 1/4W	
R722	1-249-429-11	CARBON 10K 5% 1/4W	
R723	1-249-423-11	CARBON 3.3K 5% 1/4W	
R724	1-249-429-11	CARBON 10K 5% 1/4W	
R725	1-249-417-11	CARBON 1K 5% 1/4W	
R726	1-249-417-11	CARBON 1K 5% 1/4W	
R727	1-249-417-11	CARBON 1K 5% 1/4W	
R728	1-249-417-11	CARBON 1K 5% 1/4W	
R729	1-249-417-11	CARBON 1K 5% 1/4W	
R730	1-249-417-11	CARBON 1K 5% 1/4W	
R731	1-249-429-11	CARBON 10K 5% 1/4W	
R732	1-249-429-11	CARBON 10K 5% 1/4W	
R733	1-249-429-11	CARBON 10K 5% 1/4W	
R734	1-249-417-11	CARBON 1K 5% 1/4W	
R736	1-249-429-11	CARBON 10K 5% 1/4W	
R737	1-249-409-11	CARBON 220 5% 1/4W	
		< SWITCH >	
S701	1-554-303-21	SWITCH, TACTILE (WAKE UP TIMER 1)	
S702	1-554-303-21	SWITCH, TACTILE (WAKE UP TIMER 2)	
S703	1-554-303-21	SWITCH, TACTILE (REC TIMER)	
S705	1-554-303-21	SWITCH, TACTILE (MEMORY/ENTER)	
S706	1-554-303-21	SWITCH, TACTILE (MODE)	
S707	1-554-303-21	SWITCH, TACTILE (STEREO/MONO)	
S708	1-554-303-21	SWITCH, TACTILE (BAND)	
S709	1-554-303-21	SWITCH, TACTILE (-)	
S710	1-554-303-21	SWITCH, TACTILE (+)	
		< VIBRATOR >	
XT701	1-527-997-21	VIBRATOR, CRYSTAL (32kHz)	

****

****

HARDWARE LIST

****

#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#2	7-682-547-09	SCREW +BVTT 3X6 (S)	

9-957-233-11

Sony Corporation
Audio Group

English
92E0420-1
Printed in Japan
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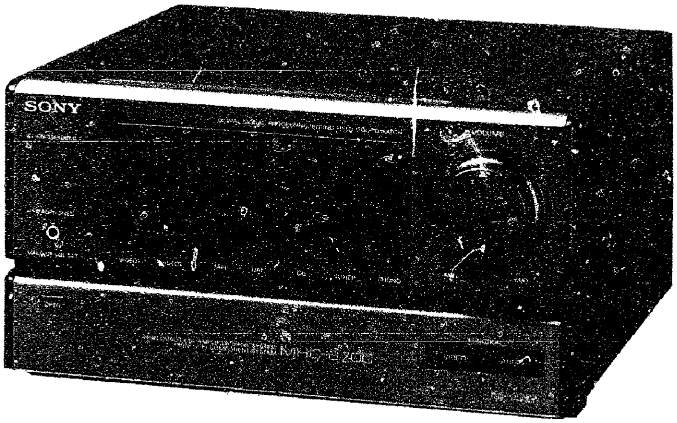
Published by Customer Relations and Service Group

TA-H6700

SERVICE MANUAL

AEP Model
UK Model



This set is the Amplifier section in MHC-6700.

SPECIFICATIONS

Continuous RMS power output	For satellite speaker: 28 + 28 watts (8 ohms at 1 kHz, DIN) 33 + 33 watts (8 ohms at 1 kHz, 5% THD) For bass speaker: 32 + 32 watts (6 ohms at 110 Hz, DIN) 37 + 37 watts (6 ohms at 110 Hz, 5% THD)
Music power output	For satellite speaker: 50 + 50 watts (8 ohms at 1 kHz, 10% THD) For bass speaker: 55 + 55 watts (6 ohms at 110 Hz, 10% THD)
Outputs	HEADPHONES (stereo minijack): accepts headphones of 8 ohms or more SPEAKER (SATELLITE): accepts speakers of 8 to 16 ohms SPEAKER (BASS): accepts speakers of 6 to 16 ohms

Design and specifications subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

INTEGRATED STEREO AMPLIFIER

SONY®

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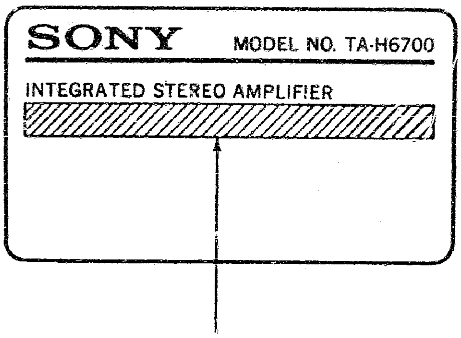
MODEL IDENTIFICATION

— Model Number Label —



AEP model : AC: 220—230V~50/60Hz
Italian model : AC: 220—230V~50Hz
Germany model: SYSTEM MHC-5700
AC: 220—230V~50Hz
UK model : AC: 240V~50Hz

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— Power/Jack/Volume Section — 11
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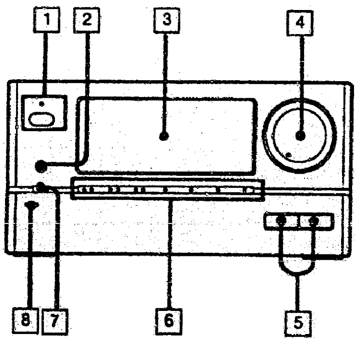
* * *

SECTION 1
GENERAL

This section is extracted from instruction manual.

1-1. PARTS IDENTIFICATION

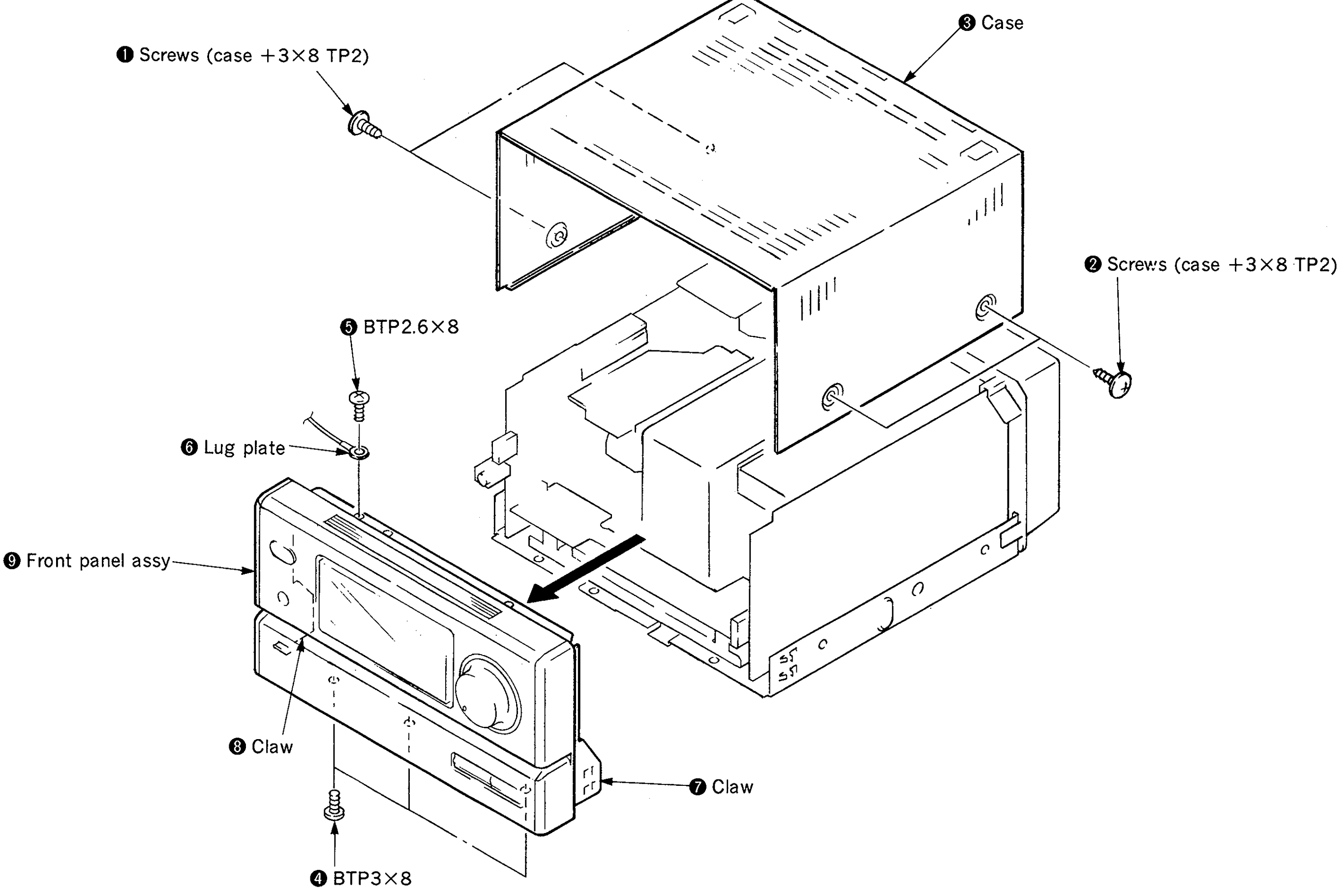
- [1] SYSTEM POWER switch and STANDBY indicator
  The indicator remains lit as long as the AC power cord is connected to a wall outlet.
- [2] HEADPHONES jack (stereo minijack)
- [3] Display window
- [4] VOLUME control ㉖
- [5] VIDEO and AUDIO FUNCTION selectors ㉒ ⑫
- [6] Function indicators ㉒ ⑫
- [7] WAKE UP VOL SET indicator ⑯
- [8] OPEN tab



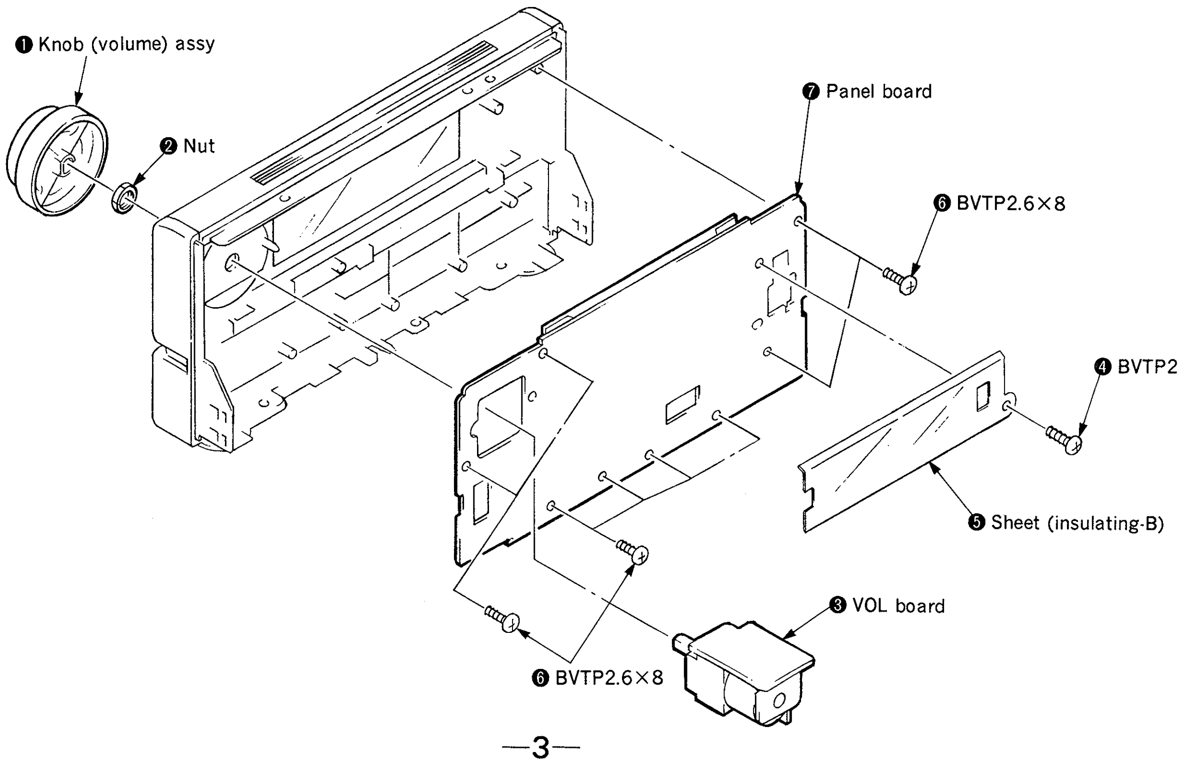
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

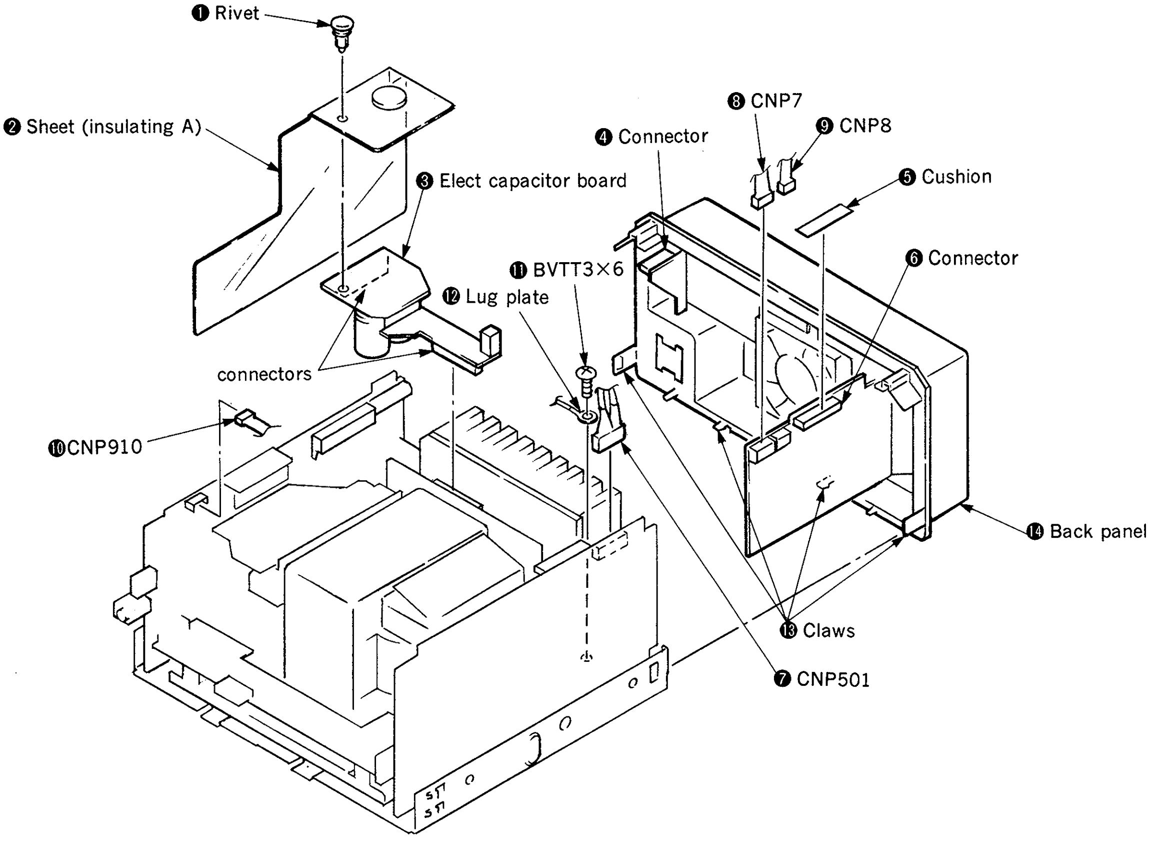
2-1. FRONT PANEL ASSY


❶ Screws (case +3×8 TP2)
❸ Case
❷ Screws (case +3×8 TP2)
❺ BTP2.6×8
❻ Lug plate
❾ Front panel assy
❽ Claw
❼ Claw
❹ BTP3×8

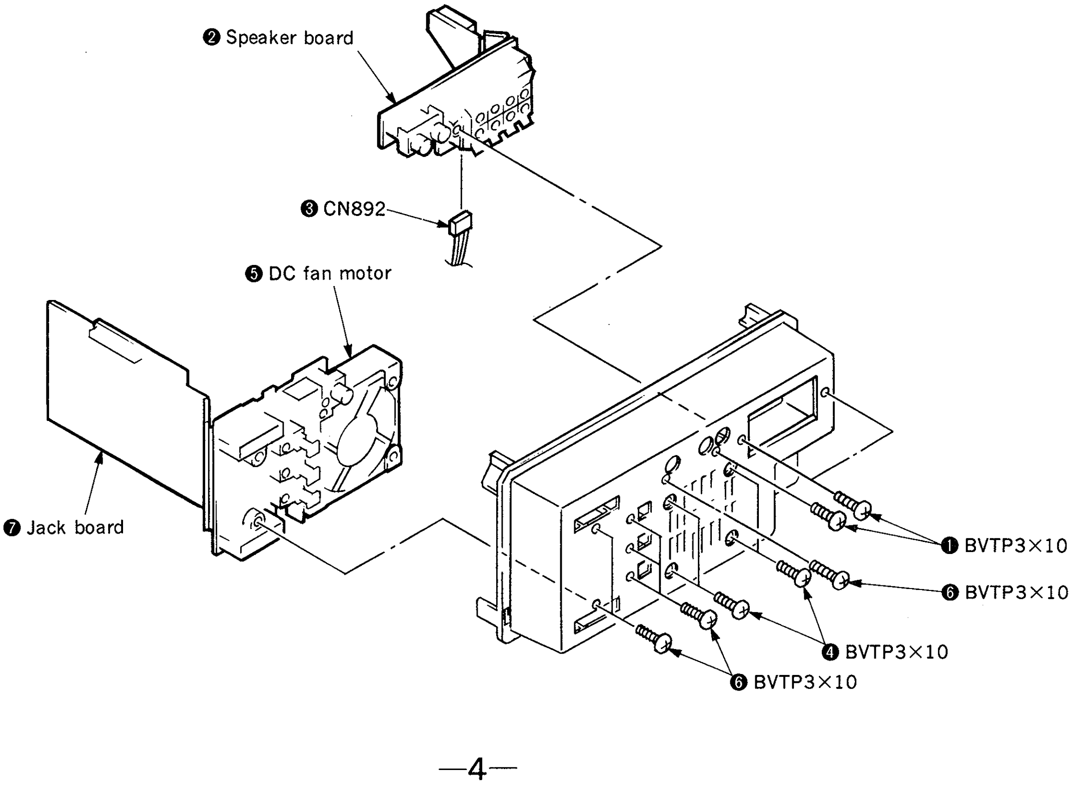
2-2. PANEL BOARD


❶ Knob (volume) assy
❷ Nut
❼ Panel board
❻ BVTP2.6×8
❹ BVTP2.6×8
❺ Sheet (insulating-B)
❸ VOL board
❻ BVTP2.6×8

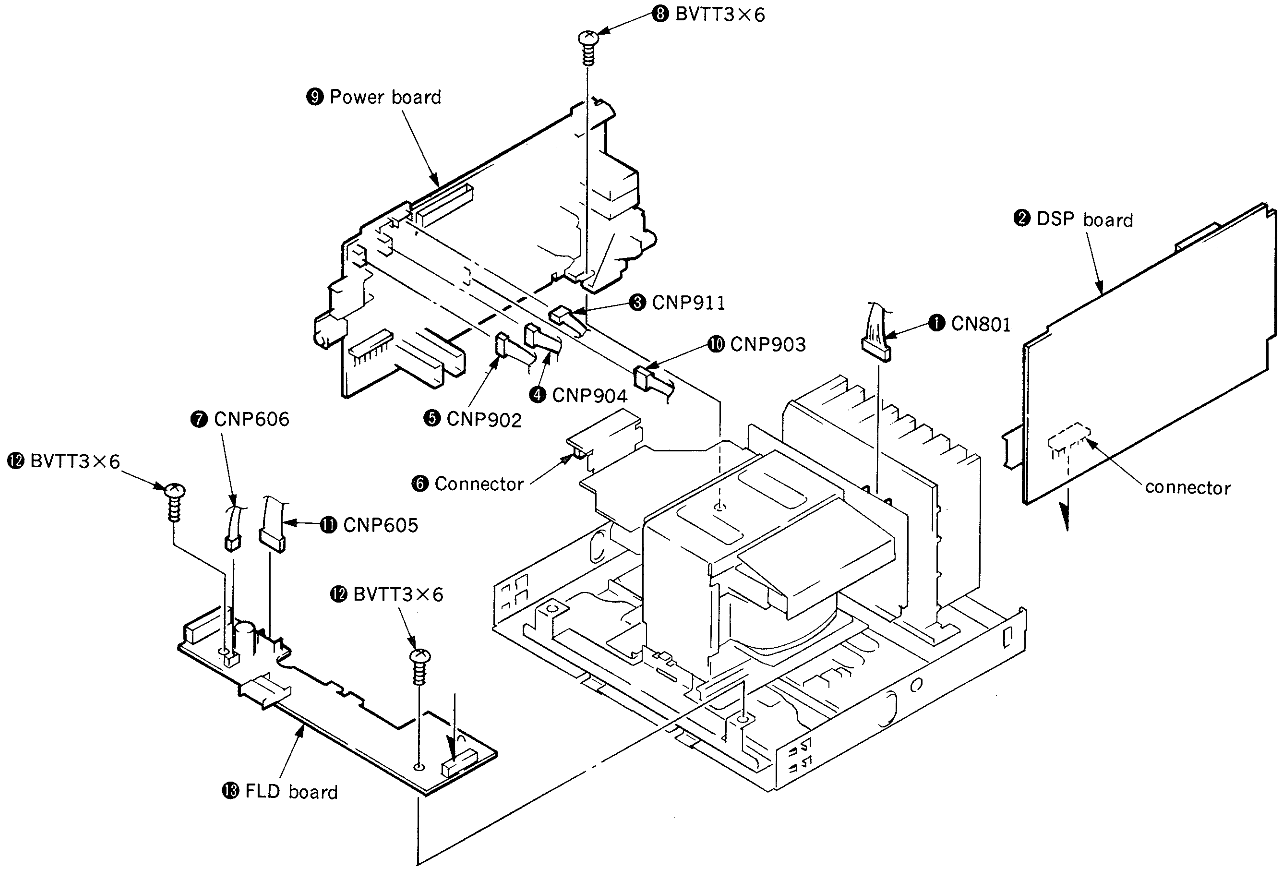
2-3. BACK PANEL


❶ Rivet
❷ Sheet (insulating A)
❸ Elect capacitor board
connectors
❿CNP910
⓫ BVTT3×6
⓬ Lug plate
❹ Connector
❽ CNP7
❾ CNP8
❺ Cushion
❻ Connector
⓮ Back panel
⓭ Claws
❼ CNP501

2-4. JACK BOARD, SPEAKER BOARD

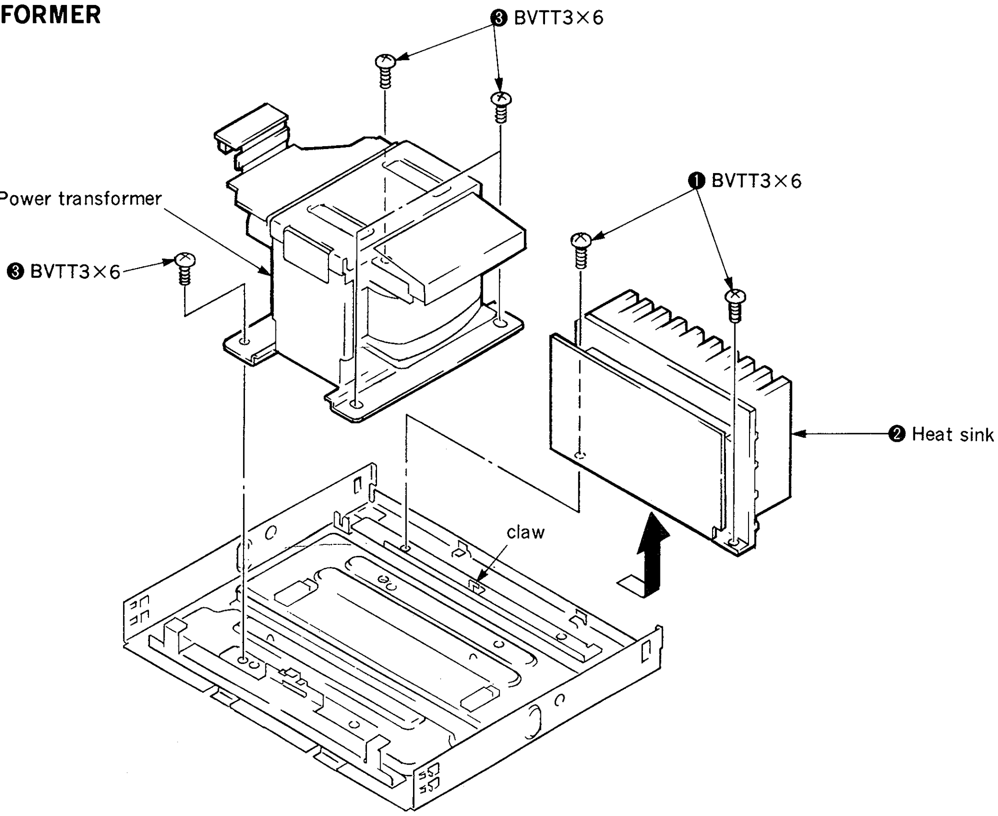

❷ Speaker board
❸ CN892
❺ DC fan motor
❼ Jack board
❶ BVTP3×10
❻ BVTP3×10
❹ BVTP3×10
❻ BVTP3×10

2-5. POWER BOARD, DSP BOARD



❽ BVTT3×6
❾ Power board
❷ DSP board
❸ CNP911
❶ CN801
❿ CNP903
❹ CNP904
❼ CNP606
❺ CNP902
⓬ BVTT3×6
❻ Connector
connector
⓫ CNP605
⓬ BVTT3×6
⓭ FLD board

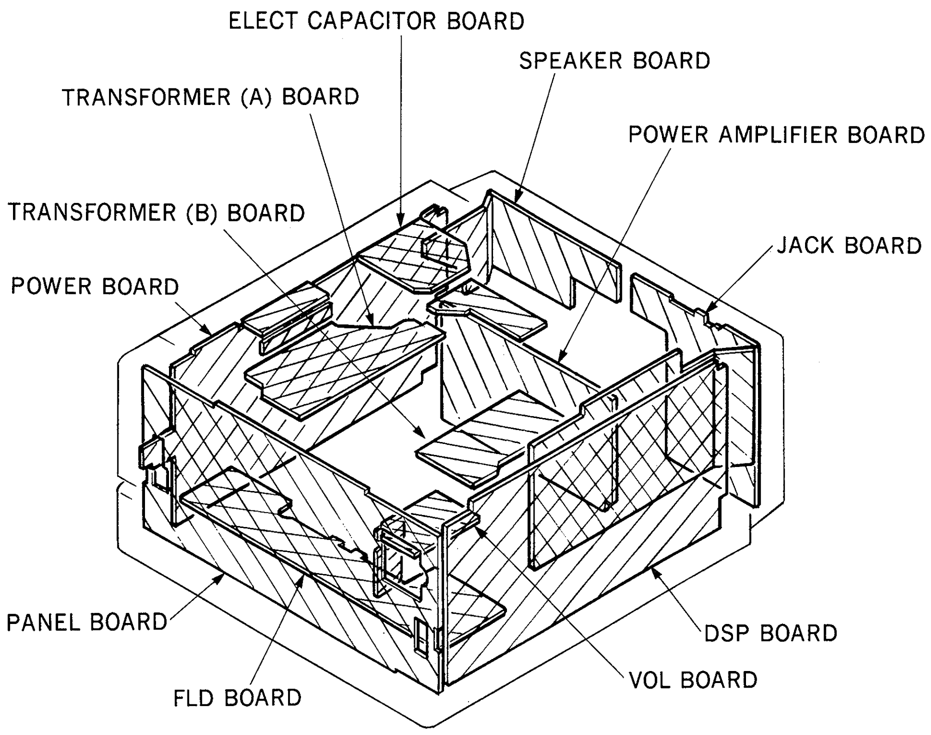
2-6. POWER TRANSFORMER



❸ BVTT3×6
❶ BVTT3×6
❹ Power transformer
❸ BVTT3×6
❷ Heat sink
claw

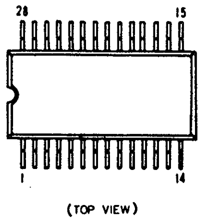
SECTION 3
DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION

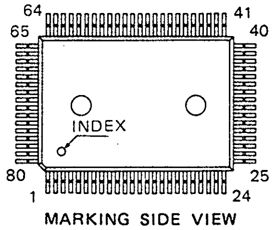

ELECT CAPACITOR BOARD
SPEAKER BOARD
TRANSFORMER (A) BOARD
POWER AMPLIFIER BOARD
TRANSFORMER (B) BOARD
JACK BOARD
POWER BOARD
PANEL BOARD
DSP BOARD
FLD BOARD
VOL BOARD

3-2. SEMICONDUCTOR LEAD LAYOUTS

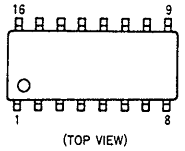
CS5339-KS
CXD2561AM


28
15
1
14
(TOP VIEW)

CXD1160AQ
CXD2905AQ
M37450M8-514FP


64
41
65
40
INDEX
80
25
1
24
MARKING SIDE VIEW

CXD2557M
MB625473PF-G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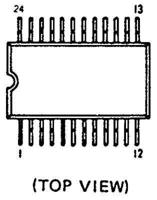
9
1
8
(TOP VIEW)

CXD2560M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13
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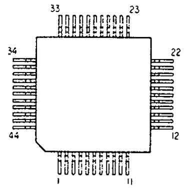
12
(TOP VIEW)

CXD2701Q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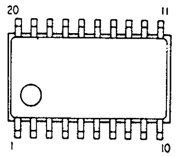
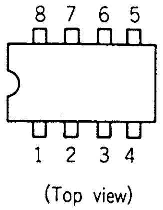
11

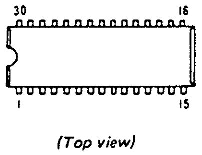
CXD8245M



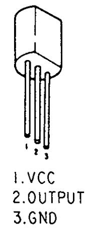
LB1639
LM393P


8 7 6 5
1 2 3 4
(Top view)

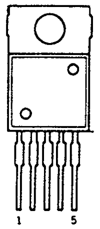
LC7822


30
16
1
15
(Top view)

LM35DZ-SL


1.VCC
2.OUTPUT
3.GND

LM3875-Q



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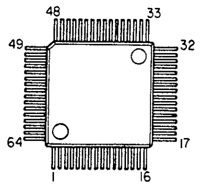
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33
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32
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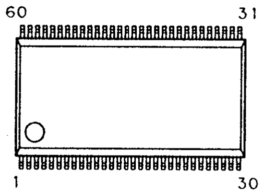
MSC7162



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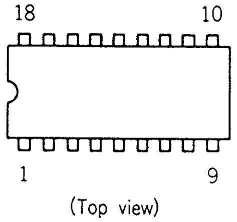
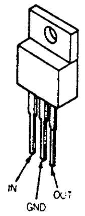

18
10
1
9
(Top view)

M5F7805L



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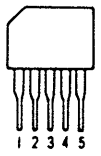
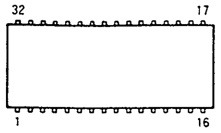
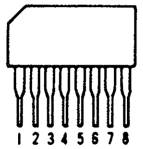


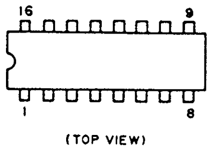
M5218AFP



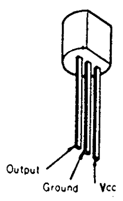
M5218AL
M5230L-A
μPC1237HA



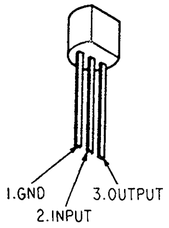
M5283P


16
9
1
8
(TOP VIEW)

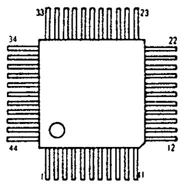
RC78L05A


Output
Ground
Vcc

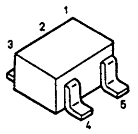
RC79L05A


1.GND
3.OUTPUT
2.INPUT

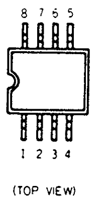
SN755721
SN755731


33
23
34
22
44
12
1
11

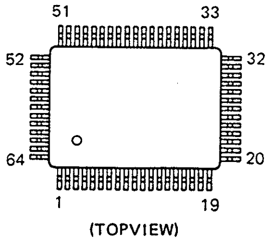
TC7S08F



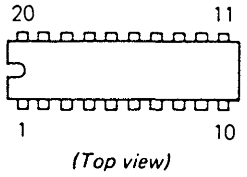
TL082CPS


8 7 6 5
1 2 3 4
(TOP VIEW)

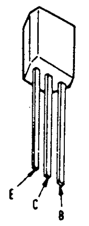
TMP90CM40F-2611


51
33
52
32
64
20
1
19
(TOPVIEW)

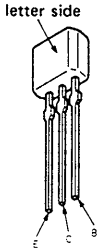
XR-1092


20
11
1
10
(Top view)

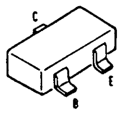
DTA114ES
DTC114ES
2SA1344
2SC2603-EF



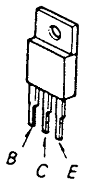
2SA1175-HFE
2SC3623A-LK


letter side
E
C
B

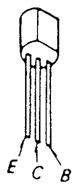
2SA1602
2SC3398
2SC3624A-L15
2SC4154



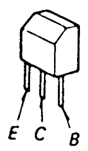
2SB1094-LK
2SD2012



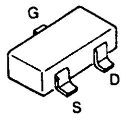
2SB1013-4
2SC1841-PAFAEA
2SD1387
2SD1616A-K



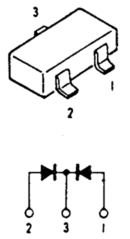
2SC3668-Y



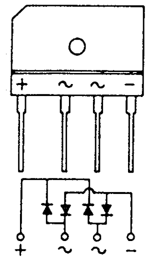
2SK208GR3



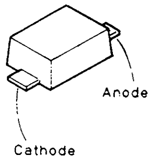
DCB010



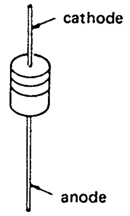
D5SBA20F01



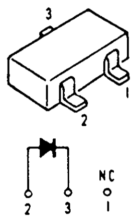
EC10QS-04
MA8056


Anode
Cathode

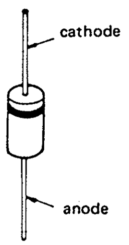
HZS6B1L
HZS30-2L
HZS33-2L
UZL-36M
11ES2


cathode
anode

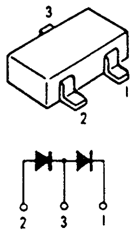
UZM6.2X



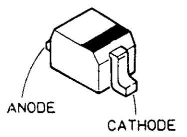
UZP-6.8BC
1N4148M


cathode
anode

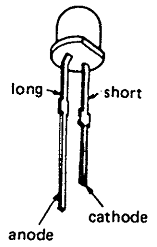
1SS226



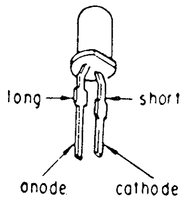
1T363


ANODE
CATHODE

SEL2210S


long
short
anode
cathode

SEL2410E-D


long
short
anode
cathode

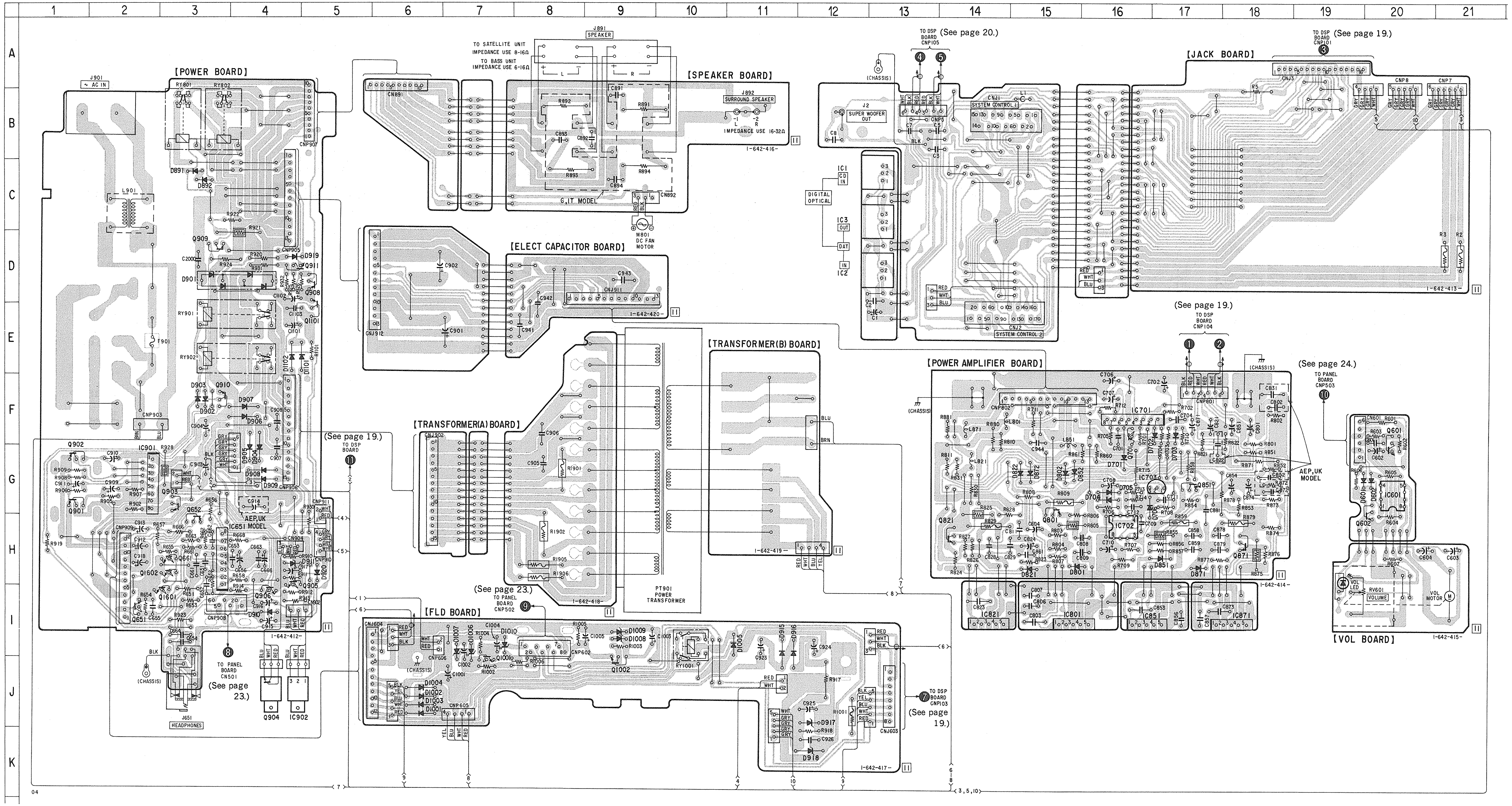
● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D601	G-20	IC1	C-13
D602	G-20	IC2	D-13
D701	G-16	IC3	C-13
D702	F-17	IC601	G-20
D703	F-17	IC651	H-3
D704	G-16	IC701	F-16
D705	G-16	IC702	H-16
D706	G-17	IC703	G-17
D801	H-15	IC801	I-15
D802	G-15	IC821	I-14
D821	H-15	IC851	I-16
D822	G-15	IC871	I-18
D851	H-17	IC901	G-2
D852	G-15	IC902	J-4
D871	H-17		
D872	G-15	Q601	F-20
D891	C-3	Q602	G-20
D892	C-3	Q651	I-2
D901	D-3	Q652	H-3
D902	F-3	Q661	H-3
D903	F-3	Q701	F-16
D904	G-4	Q801	H-15
D905	G-4	Q821	H-14
D906	F-4	Q851	G-17
D907	F-4	Q871	H-18
D908	G-4	Q901	G-1
D909	G-4	Q902	G-1
D910	I-4	Q903	G-3
D911	H-4	Q904	J-4
D915	I-11	Q905	H-4
D916	I-11	Q906	H-4
D917	J-12	Q908	D-5
D918	K-12	Q909	D-3
D919	D-5	Q910	F-3
D920	H-5	Q911	D-5
D1001	J-6	Q1001	J-7
D1002	J-6	Q1002	J-9
D1003	J-6	Q1101	E-5
D1004	J-6	Q1601	I-3
D1005	I-11	Q1602	H-3
D1006	I-7		
D1007	I-7		
D1008	I-9		
D1009	I-9		
D1010	I-7		
D1101	E-4		
D1102	E-4		

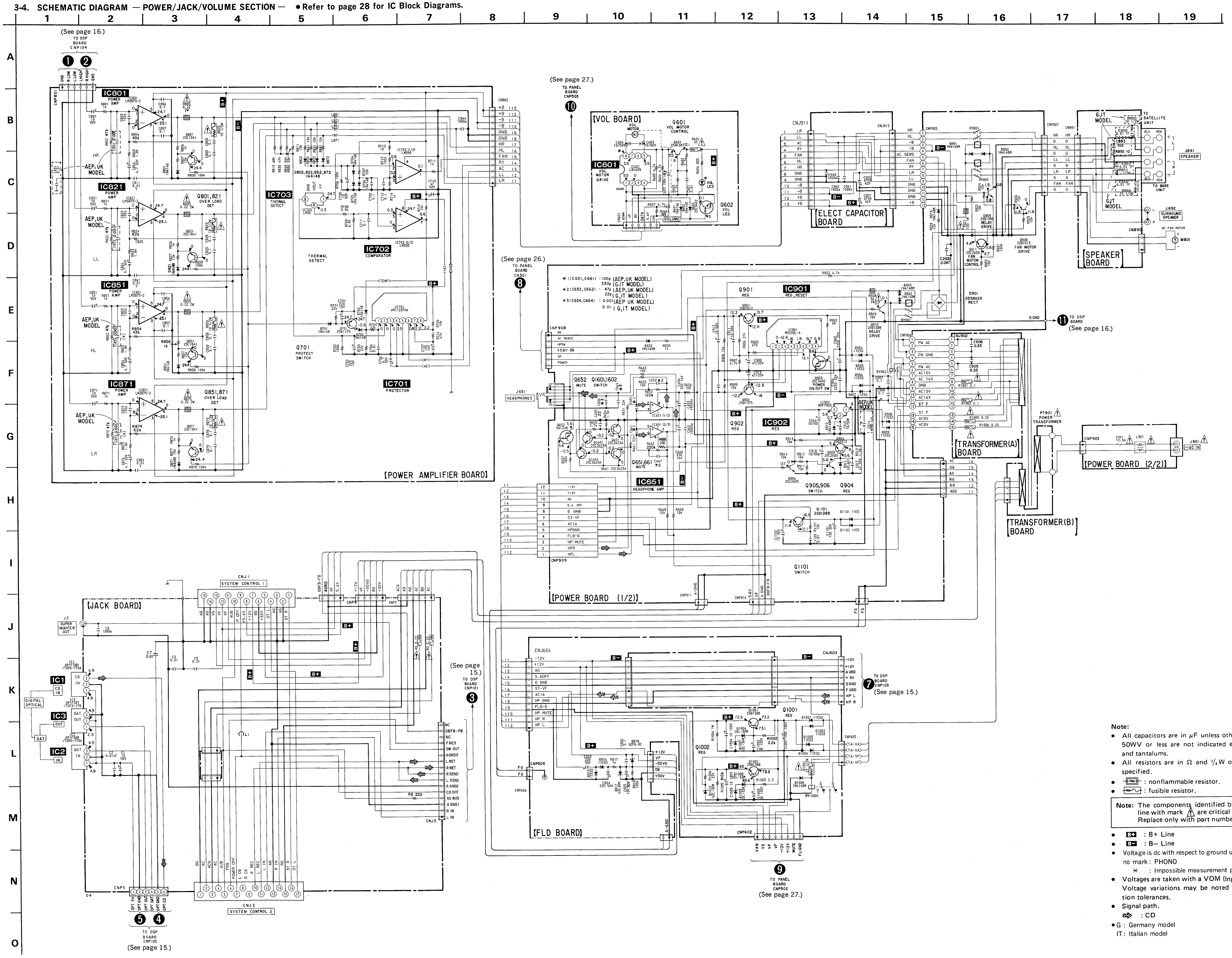
Note:

- ● o—— : parts extracted from the component side.
- ● G : Germany model
  IT : Italian model

3-3. PRINTED WIRING BOARDS — POWER/JACK/VOLUME SECTION — **● Refer to page 6 for Semiconductor Lead Layouts.**


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
A B C D E F G H I J K
[POWER BOARD]
[SPEAKER BOARD]
[JACK BOARD]
[ELECT CAPACITOR BOARD]
[TRANSFORMER(A) BOARD]
[TRANSFORMER(B) BOARD]
[POWER AMPLIFIER BOARD]
[FLD BOARD]
[VOL BOARD]
J901 ~ AC IN
J891 SPEAKER
J892 SURROUND SPEAKER
TO SATELLITE UNIT IMPEDANCE USE 8-16Ω
TO BASS UNIT IMPEDANCE USE 6-16Ω
IMPEDANCE USE 16-32Ω
G,IT MODEL
M801 DC FAN MOTOR
PT901 POWER TRANSFORMER
J2 SUPER WOOFER OUT
DIGITAL OPTICAL
CNJ1 SYSTEM CONTROL 1
CNJ2 SYSTEM CONTROL 2
TO DSP BOARD CNP105 (See page 20.)
TO DSP BOARD CNP101 (See page 19.)
TO DSP BOARD CNP104 (See page 19.)
TO DSP BOARD (See page 19.)
TO DSP BOARD CNP103 (See page 19.)
TO PANEL BOARD CN501 (See page 23.)
TO PANEL BOARD CNP502 (See page 23.)
TO PANEL BOARD CNP603 (See page 24.)
AEP,UK MODEL
J651 HEADPHONES
VOL LED
VOLUME
VOL MOTOR
(CHASSIS)
1-642-412-
1-642-413-
1-642-414-
1-642-415-
1-642-416-
1-642-417-
1-642-418-
1-642-419-
1-642-420-

3-4. SCHEMATIC DIAGRAM — POWER/JACK/VOLUME SECTION — • Refer to page 28 for IC Block Diagrams.



[POWER AMPLIFIER BOARD]
IC801 POWER AMP
IC821 POWER AMP
IC851 POWER AMP
IC871 POWER AMP
Q801,821 OVER LOAD DET
Q851,871 OVER LOAD DET
IC703 THERMAL DETECT
IC702 COMPARATOR
IC701 PROTECTOR
Q701 PROTECT SWITCH
AEP,UK MODEL
(See page 16.) TO DSP BOARD CNP104
[VOL BOARD]
IC601 VOL MOTOR DRIVE
Q601 VOL MOTOR CONTROL
Q602 VOL LED
(See page 27.) TO PANEL BOARD CNP503
[ELECT CAPACITOR BOARD]
[SPEAKER BOARD]
TO SATELLITE UNIT
TO BASS UNIT
J891 SPEAKER
J892 SURROUND SPEAKER
M801 DC FAN MOTOR
Q908 FAN MOTOR DRIVE
Q909 RELAY DRIVE
Q910 RELAY DRIVE
D901 RECT
(See page 26.) TO PANEL BOARD CN501
J651 HEADPHONES
IC651 HEADPHONE AMP
Q652 MUTE
Q1601,1602 SWITCH
Q651,661 MUTE
Q901 REG
IC901 REG,RESET
Q902 REG
IC902 REG
Q905,906 SWITCH
Q904 REG
Q1101 SWITCH
[POWER BOARD (1/2)]
[POWER BOARD (2/2)]
[TRANSFORMER(A)] BOARD
[TRANSFORMER(B)] BOARD
PT901 POWER TRANSFORMER
J901 ~AC IN
TO DSP BOARD (See page 16.)
[JACK BOARD]
J2 SUPER WOOFER OUT
IC1 CD IN
IC3 OUT
IC2 IN
DIGITAL OPTICAL
SYSTEM CONTROL 1
SYSTEM CONTROL 2
(See page 15.) TO DSP BOARD CNP101
TO DSP BOARD CNP105 (See page 15.)
[FLD BOARD]
Q1001 REG
Q1002 REG
TO DSP BOARD CNP103 (See page 15.)
TO PANEL BOARD CNP502 (See page 27.)

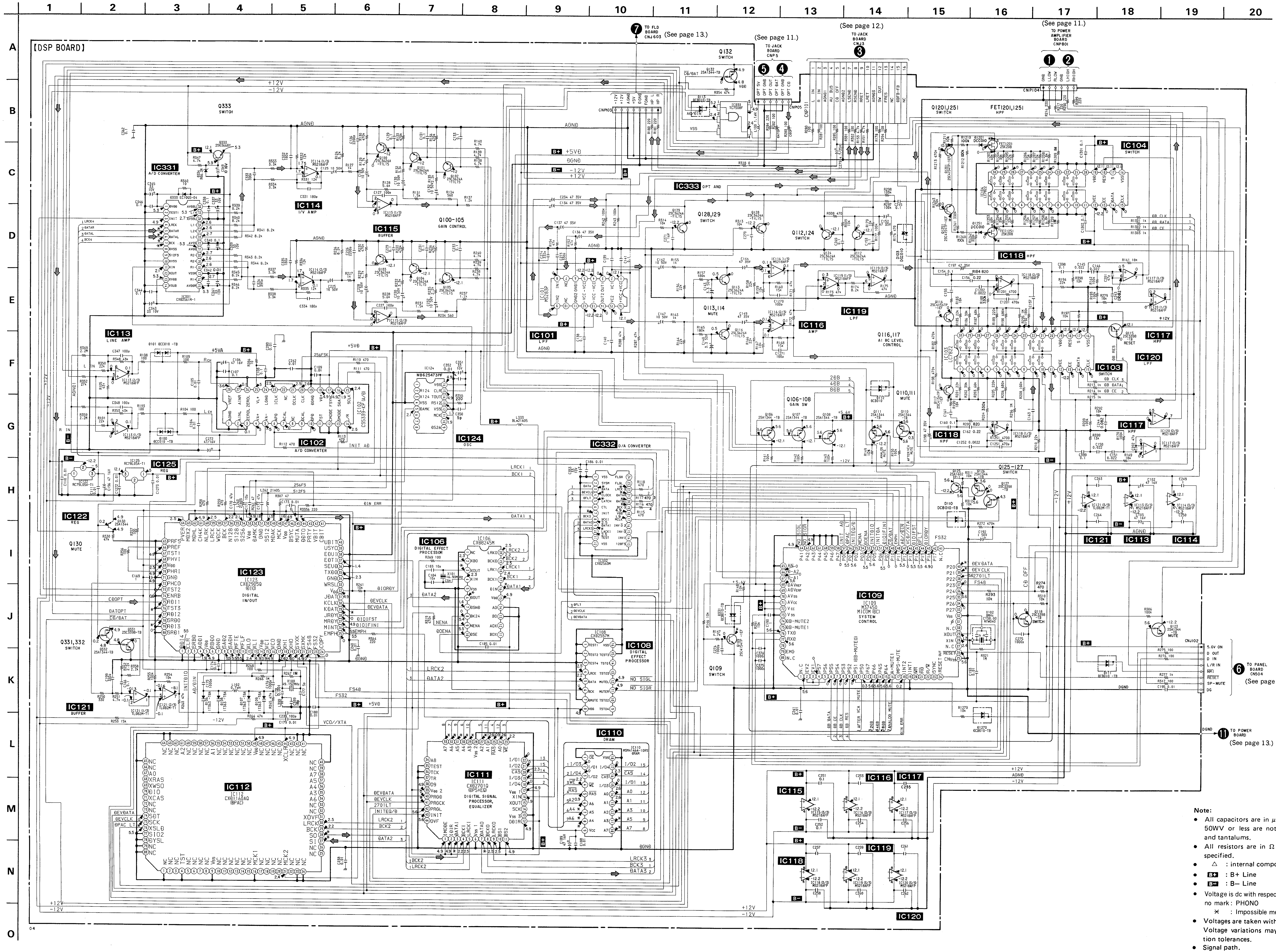
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- : nonflammable resistor.
- : fusible resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- B+ : B+ Line
- B– : B– Line
- Voltage is dc with respect to ground under no-signal conditions.
  no mark : PHONO
  ✳ : Impossible measurement point
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : CD
- G : Germany model
  IT : Italian model

3-5. SCHEMATIC DIAGRAM — DSP SECTION —


[DSP BOARD]
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
A B C D E F G H I J K L M N O
⑦ TO FLD BOARD CNJ603 (See page 13.)
(See page 11.) TO JACK BOARD CNP5 ⑤ ④
(See page 12.) TO JACK BOARD CNJ3 ③
(See page 11.) TO POWER AMPLIFIER BOARD CNP801 ① ②
⑥ TO PANEL BOARD CN504 (See page 26.)
⑪ TO POWER BOARD (See page 13.)
IC331 A/D CONVERTER
IC114 I/V AMP
IC115 BUFFER
Q100-105 GAIN CONTROL
Q333 SWITCH
IC333 OPT AND
Q132 SWITCH
Q128,129 SWITCH
Q112,124 SWITCH
Q113,114 MUTE
IC101 LPF
IC116 AMP
IC119 LPF
Q116,117 AI BC LEVEL CONTROL
Q1201,1251 SWITCH
FET1201,1251 HPF
IC104 SWITCH
IC118 HPF
IC117 HPF
IC120 LPF
IC103 SWITCH
IC113 LINE AMP
IC102 A/D CONVERTER
IC124 OSC
IC125 REG
IC332 D/A CONVERTER
Q106-108 GAIN SW
Q110,111 MUTE
Q125-127 SWITCH
IC122 REG
Q130 MUTE
IC123 CXD1205Q (BID) DIGITAL IN/OUT
IC106 DIGITAL EFFECT PROCESSOR
IC108 DIGITAL EFFECT PROCESSOR
IC109 M37450 MICOM (BC) SYSTEM CONTROL
Q331,332 SWITCH
IC121 BUFFER
IC112 CX01160AQ (BPAC)
IC111 CXD2701Q (DPS-EQ) DIGITAL SIGNAL PROCESSOR, EQUALIZER
IC110 DRAM
Q109 SWITCH
Q133 MUTE
CNJ102
+12V
-12V
AGND
DGND
B+
B-

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line
- B– : B– Line
- Voltage is dc with respect to ground under no-signal conditions.
  no mark : PHONO
  ✳ : Impossible measurement point
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : CD

3-6. PRINTED WIRING BOARD — DSP SECTION —

• Refer to page 6 for Semiconductor Lead Layouts.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
A
B
C
D
E
F
G
H
[DSP BOARD] (COMPONENT SIDE)
[DSP BOARD] (CONDUCTOR SIDE)
(See page 10.)
TO POWER AMPLIFIER BOARD CNP801
①
②
BLK
WHT
RED
CNP104
(See page 10.)
TO JACK BOARD CNJ3
③
(See page 10.)
TO JACK BOARD CNP5
④
⑤
CNP101
CNP105
TO PANEL BOARD CN504
⑥
(See page 24.)
CNJ102
CNP103
⑦
TO FLD BOARD CNJ603
(See page 10.)
⑪
TO POWER BOARD
(See page 9.)
IC101
IC102
IC103
IC104
IC106
IC108
IC109
IC110
IC111
IC112
IC113
IC114
IC115
IC116
IC117
IC118
IC119
IC120
IC121
IC122
IC123
IC124
IC125
IC331
IC332
IC333
AEP,UK MODEL : 1-642-536-
G,IT MODEL : 1-644-695-
11
04

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D100	C-23	IC123	D-3
D101	C-23	IC124	C-21
D103	G-13	IC125	D-23
D106	E-3	IC331	D-5
D107	E-3	IC332	E-5
D108	E-3	IC333	D-4
D109	E-3		
D110	F-18	Q100	E-6
D111	G-16	Q101	E-6
D112	G-8	Q102	D-6
D113	D-4	Q103	E-18
D331	G-16	Q104	D-18
D333	D-19	Q105	D-18
D334	C-20	Q106	E-18
D1201	C-11	Q107	E-18
D1251	D-10	Q108	E-18
D1270	G-9	Q109	G-16
		Q110	G-8
FET1201	C-11	Q111	G-8
FET1251	D-10	Q112	D-9
		Q113	E-16
IC101	D-16	Q114	E-16
IC102	F-1	Q115	B-10
IC103	C-14	Q116	C-9
IC104	D-14	Q117	D-15
IC106	F-5	Q118	E-7
IC108	G-5	Q123	G-13
IC109	F-7	Q124	E-16
IC110	G-21	Q125	F-17
IC111	F-3	Q126	F-17
IC112	F-21	Q127	F-17
IC113	C-23	Q128	B-18
IC114	C-18	Q129	B-17
IC115	D-17	Q130	D-20
IC116	F-9	Q132	D-4
IC117	E-10	Q331	D-4
IC118	D-15	Q332	D-4
IC119	E-9	Q333	C-20
IC120	C-15	Q1201	D-11
IC121	C-2	Q1251	D-11
IC122	D-23		

Note:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor side)	Parts on the pattern face side seen from the pattern face are indecated.
Parts face side: (Component side)	Parts on the parts face side seen from the parts face are indecated.

- G : Germany model
  IT : Italian model

● Semiconductor Location

Ref. No.	Location
D501	F-11
D502	F-13
D503	F-12
D504	C-22
D505	C-20
D506	C-19
D507	C-18
D508	C-17
D509	C-15
D510	F-15
D511	C-21
D512	C-19
D514	C-17
D515	C-16
D521	C-20
D522	B-17
D523	B-25
IC501	D-20
IC502	E-21
IC503	F-20
IC504	D-18
IC505	F-18
IC506	E-17
IC507	E-15
IC508	C-3
IC509	D-24
Q501	F-13
Q502	F-11
Q503	F-12
Q504	F-11
Q505	F-11
Q506	F-15
Q507	E-11
Q508	C-5
Q509	C-7
Q510	C-8
Q511	C-9
Q512	C-11
Q513	C-11
Q514	C-11
Q515	C-19
Q516	C-19
Q517	C-19

3-7. PRINTED WIRING BOARD — PANEL SECTION —

● Refer to page 6 for Semiconductor Lead Layouts.

[PANEL BOARD] (COMPONENT SIDE)

[PANEL BOARD] (CONDUCTOR SIDE)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
A B C D E F G
IC508
Q508
Q509
Q510
Q511
Q512
Q513
Q514
Q507
Q501
Q502
Q503
Q504
Q505
D501
D502
D503
AEP,UK MODEL : 1-642-535-
G,IT MODEL : 1-644-694-
BALANCE
DSP
PRESET
DYNAMIC SOUND
PARAMETRIC EQUALIZER
PRESENCE SURROUND
A.I. BC
ON/OFF
CURSOR CONTROL
MEMORY
VIDEO
FUNCTION
AUDIO
WAKE UP VOL SET
DISPLAY
VIDEO 1
VIDEO 2
TAPE
DAT
CD
TUNER
PHONO
FL501 FLUORESCENT INDICATOR TUBE
TO FLD BOARD CNP602 ⑨ (See page 9.)
TO POWER BOARD CNP908 ⑧ (See page 9.)
TO DSP BOARD CNJ102 ⑥ (See page 18.)
TO VOL BOARD CN601 ⑩ (See page 10.)
SYSTEM POWER ON/STANDBY
IC501
IC502
IC503
IC504
IC505
IC506
IC507
IC509
AEP,UK MODEL : 1-642-535-
G,IT MODEL : 1-644-694-

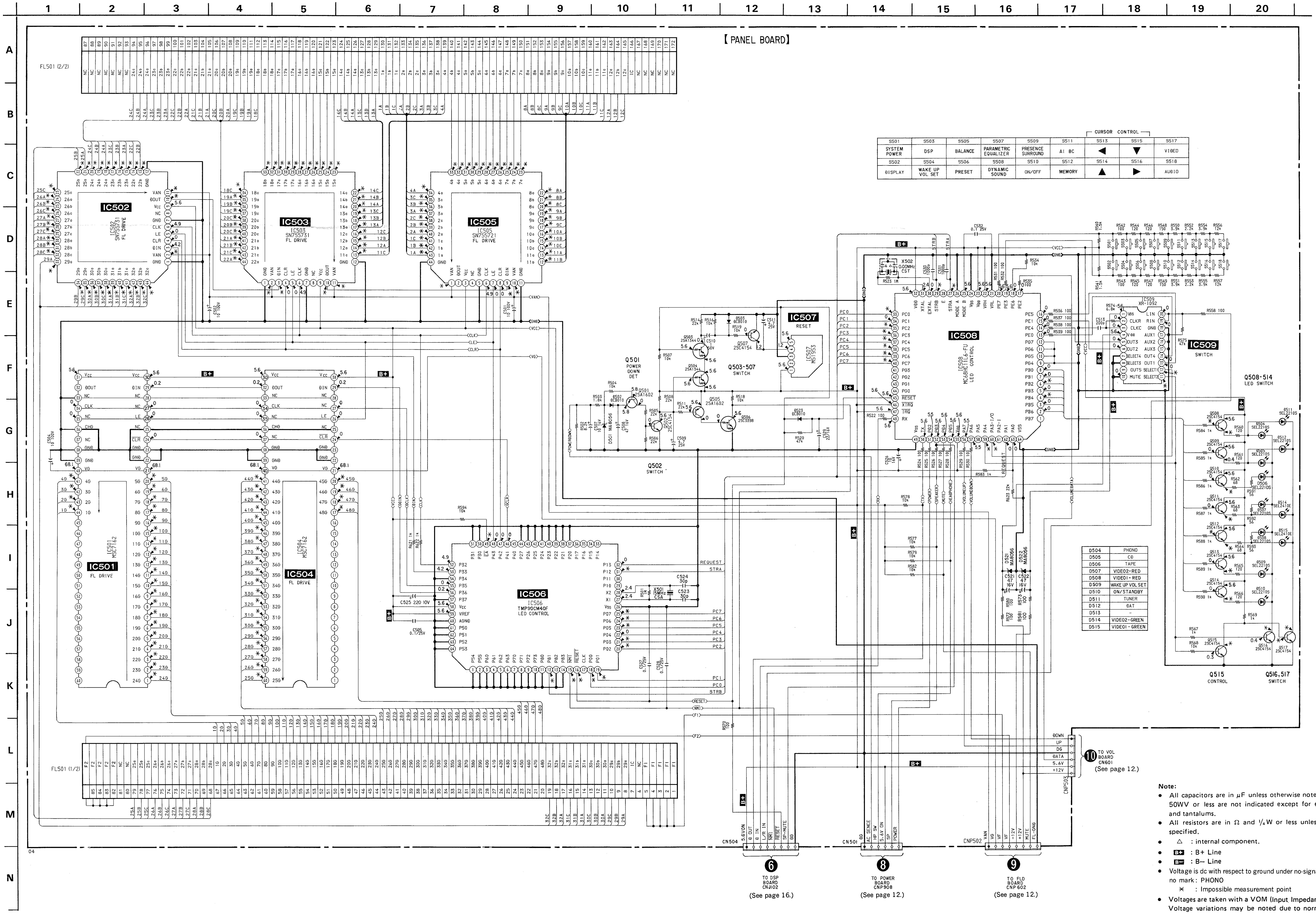
Note:
- ● ● : Through hole.
- ▨ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor side)	Parts on the pattern face side seen from the pattern face are indecated.
Parts face side: (Component side)	Parts on the parts face side seen from the parts face are indecated.

- G : Germany model
  IT : Italian model

3-8. SCHEMATIC DIAGRAM — PANEL SECTION —



【PANEL BOARD】
FL501 (2/2)
FL501 (1/2)
IC501
M5C7162
FL DRIVE
IC502
SN755721
FL DRIVE
IC503
SN755731
FL DRIVE
IC504
M5C7162
FL DRIVE
IC505
SN755721
FL DRIVE
IC506
TMP90CM40F
LED CONTROL
IC507
M51953
RESET
IC508
MC68HC11L6-FU
LED CONTROL
IC509
XR-1092
SWITCH
Q501
POWER DOWN DET
Q502
SWITCH
Q503-507
SWITCH
Q508-514
LED SWITCH
Q515
CONTROL
Q516,517
SWITCH
X501 5MHz CSA
X502 8.00MHz CST
B+
CN504
⑥ TO DSP BOARD CNJ102
(See page 16.)
CN501
⑧ TO POWER BOARD CNP908
(See page 12.)
CNP502
⑨ TO FLD BOARD CNP602
(See page 12.)
CNP503
⑩ TO VOL BOARD CN601
(See page 12.)
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
A
B
C
D
E
F
G
H
I
J
K
L
M
N
04

CURSOR CONTROL

S501	S503	S505	S507	S509	S511	S513	S515	S517
SYSTEM POWER	DSP	BALANCE	PARAMETRIC EQUALIZER	PRESENCE SURROUND	AI BC	◀	▼	VIDEO
S502	S504	S506	S508	S510	S512	S514	S516	S518
DISPLAY	WAKE UP VOL SET	PRESET	DYNAMIC SOUND	ON/OFF	MEMORY	▲	▶	AUDIO

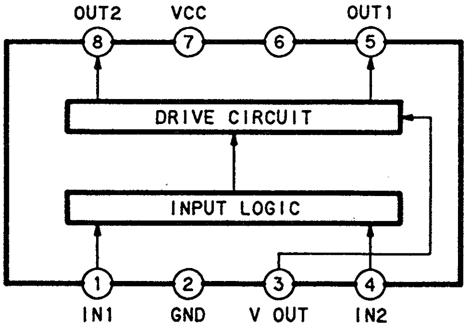
D504	PHONO
D505	CD
D506	TAPE
D507	VIDEO2-RED
D508	VIDEO1-RED
D509	WAKE UP VOL SET
D510	ON/STANDBY
D511	TUNER
D512	DAT
D513	–
D514	VIDEO2-GREEN
D515	VIDEO1-GREEN

Note:

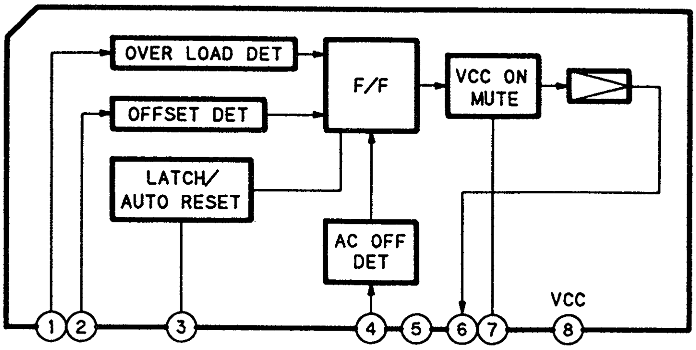
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line
- B– : B– Line
- Voltage is dc with respect to ground under no-signal conditions.
  no mark : PHONO
  ⁎ : Impossible measurement point
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.

- **IC Block Diagrams**

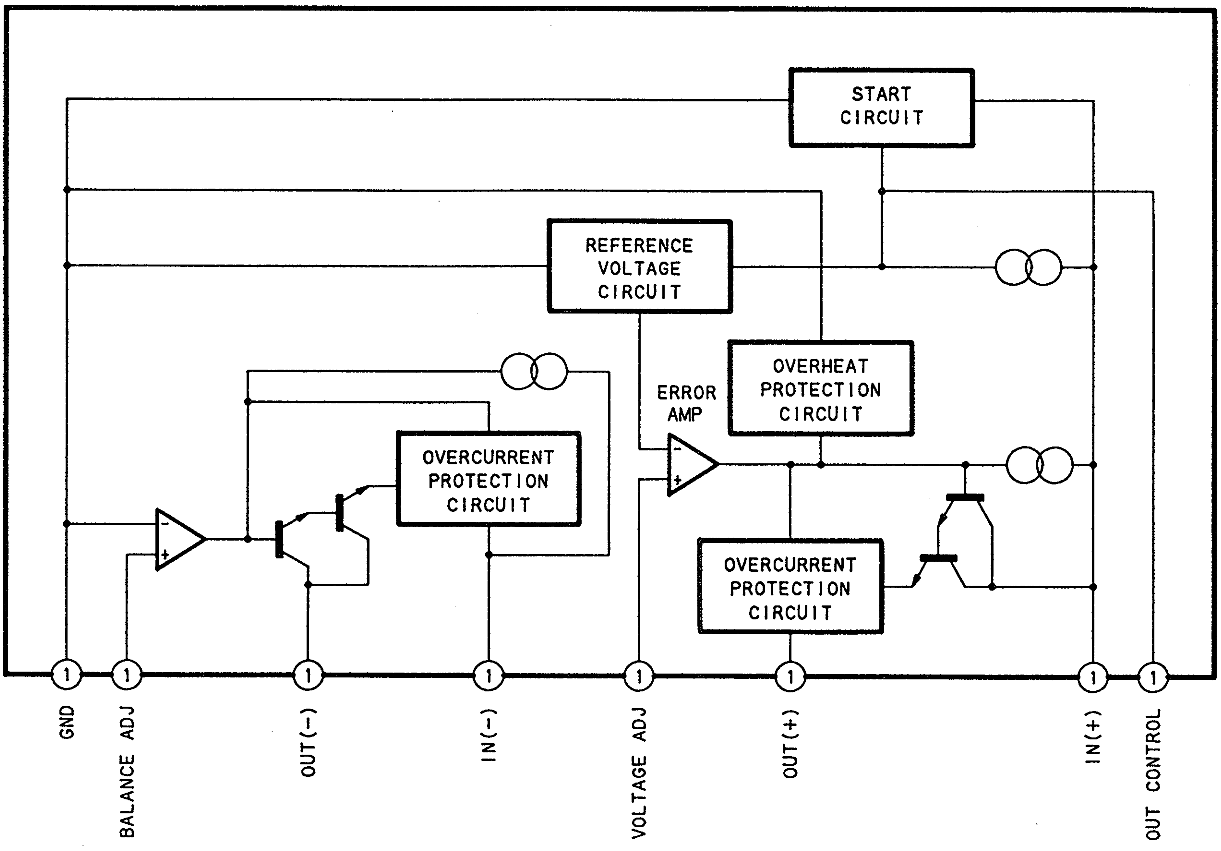
IC601 LB1639


OUT2
VCC
OUT1
8
7
6
5
DRIVE CIRCUIT
INPUT LOGIC
1
2
3
4
IN1
GND
V OUT
IN2

IC701 μPC1237HA


OVER LOAD DET
OFFSET DET
LATCH/
AUTO RESET
F/F
AC OFF
DET
VCC ON
MUTE
VCC
1
2
3
4
5
6
7
8

IC901 M5230L-A


START
CIRCUIT
REFERENCE
VOLTAGE
CIRCUIT
OVERHEAT
PROTECTION
CIRCUIT
ERROR
AMP
OVERCURRENT
PROTECTION
CIRCUIT
OVERCURRENT
PROTECTION
CIRCUIT
1
1
1
1
1
1
1
1
GND
BALANCE ADJ
OUT(-)
IN(-)
VOLTAGE ADJ
OUT(+)
IN(+)
OUT CONTROL

SECTION 4
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts Example :

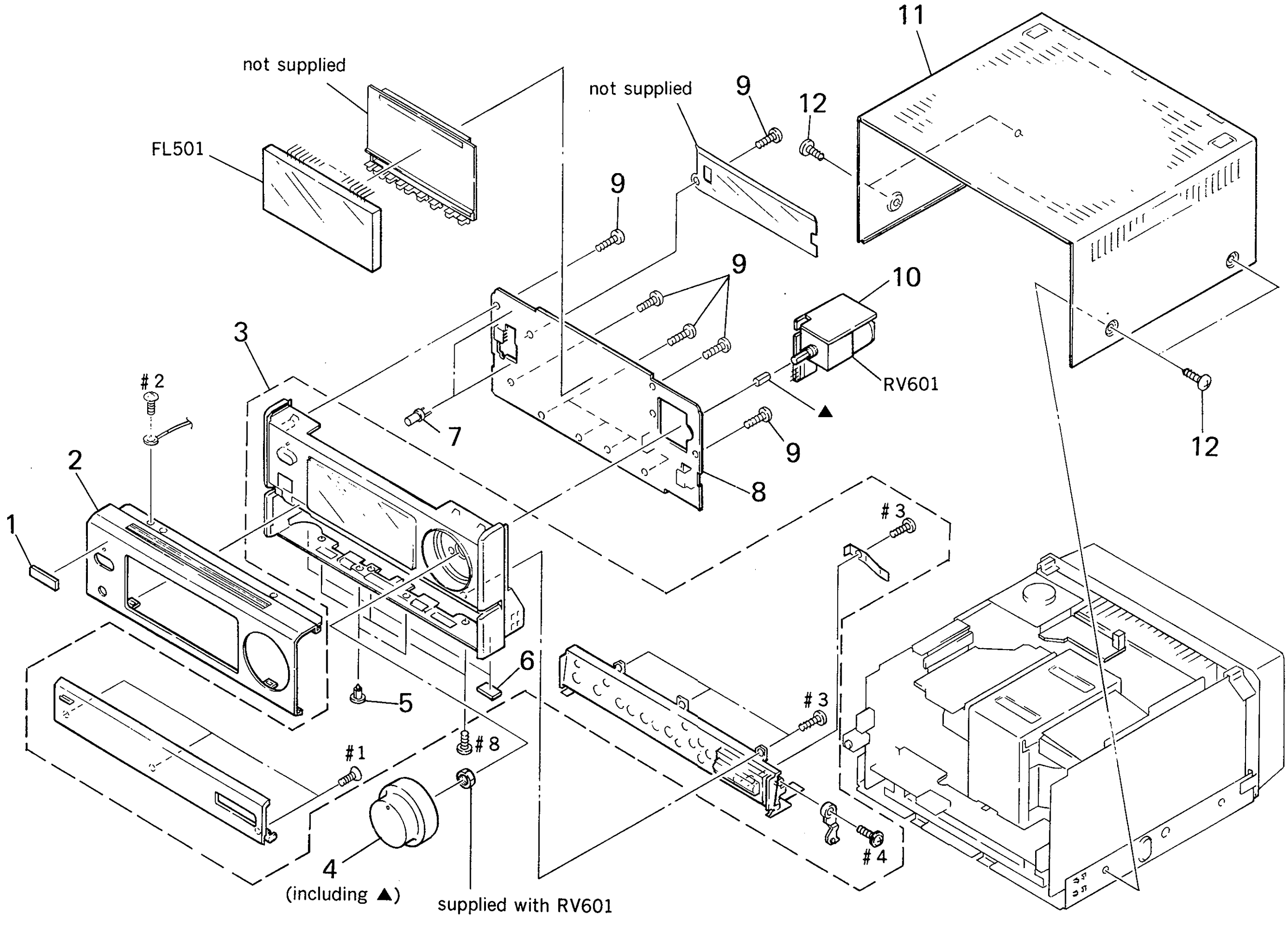
  KNOB, BALANCE (WHITE)... (RED)
  ↑ Parts Color ↑ Cabinet's Color

- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

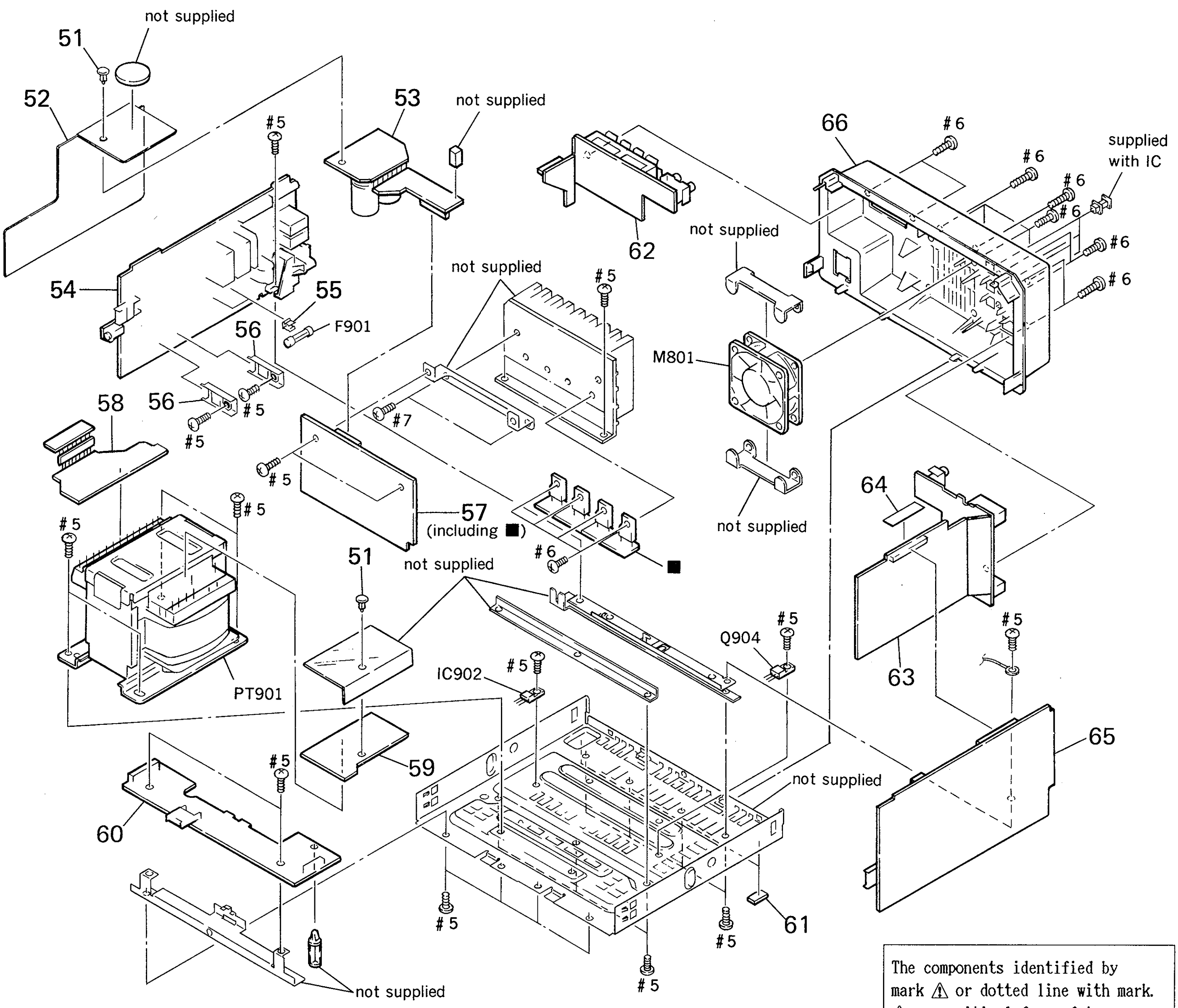
- G : Germany model
- IT : Italian model

4-1. FRONT PANEL ASSY



Ref. No.	Part No.	Description	Remark
1	4-942-636-01	EMBLEM (NO. 3. 5), SONY	
2	X-4942-475-1	PANEL ASSY, FRONT	
3	X-4942-467-1	PANEL (BASE) ASSY	
4	X-4942-472-2	KNOB (VOLUME) ASSY	
5	4-812-134-00	RIVET NYLON, 3. 5	
6	4-930-336-21	FOOT (FELT)	
* 7	3-362-478-21	HOLDER (T), LED	
* 8	A-4347-005-A	PANEL BOARD, COMPLETE (AEP, UK)	
* 8	A-4356-121-A	PANEL BOARD, COMPLETE (G, IT)	
9	4-951-620-01	SCREW (2. 6X8), +BVTP	
* 10	1-642-415-11	VOL BOARD	
* 11	4-932-841-41	CASE	
12	3-363-099-01	SCREW (CASE +3X8 TP2)	
FL501	1-519-654-11	INDICATOR TUBE, FLUORESCENT	
RV601	1-241-803-11	RES, VAR, CARBON (WITH MOTOR) 10K (VOLUME)	

4-2. CHASSIS SECTION


not supplied
51
52
53
not supplied
#5
66
#6
#6
#6
#6
#6
#6
supplied with IC
62
not supplied
not supplied
#5
54
55
F901
56
M801
58
56
#5
#5
#7
#5
57
(including ■)
#5
#5
#5
64
not supplied
51
not supplied
#6
■
#5
Q904
#5
IC902
#5
63
PT901
65
#5
59
not supplied
60
#5
#5
61
#5
not supplied

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
51	4-812-134-11	RIVET NYLON, 3.5	
* 52	4-945-055-11	SHEET (INSULATING A)	
* 53	1-642-420-11	ELECT CAPACITOR BOARD	
* 54	A-4347-007-A	POWER BOARD, COMPLETE (AEP, UK)	
* 54	A-4347-012-A	POWER BOARD, COMPLETE (G, IT)	
* 55	1-533-213-31	HOLDER, FUSE	
* 56	3-309-144-21	HEAT SINK	
* 57	A-4347-010-A	POWER AMPLIFIER BOARD, COMPLETE (AEP, UK)	
* 57	A-4347-013-A	POWER AMPLIFIER BOARD, COMPLETE (G, IT)	
* 58	1-642-418-11	TRANSFORMER (A) BOARD	
* 59	1-642-419-11	TRANSFORMER (B) BOARD	
* 60	A-4345-999-A	FLD BOARD, COMPLETE	
61	4-930-336-21	FOOT (FELT)	
* 62	1-642-416-11	SPEAKER BOARD	
* 63	1-642-413-11	JACK BOARD	
64	4-860-518-00	CUSHION	
* 65	A-4347-003-A	DSP BOARD, COMPLETE (AEP, UK)	
* 65	A-4356-123-A	DSP BOARD, COMPLETE (G, IT)	
* 66	4-948-766-11	PANEL, BACK	
⚠F901	1-532-286-00	FUSE, TIME-LAG (T2.5A)	
IC902	8-759-231-53	IC M5F7805L	
M801	1-541-860-11	MOTOR, DC FAN	
⚠PT901	1-450-881-11	TRANSFORMER, POWER (UK)	
⚠PT901	1-450-883-11	TRANSFORMER, POWER (AEP, G, IT)	
Q904	8-729-209-15	TRANSISTOR 2SD2012	

SECTION 5
ELECTRICAL PARTS LIST

DSP **PANEL**

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

- G : Germany model
- IT : Italian model

Ref. No.	Part No.	Description			Remark
*	A-4347-003-A	DSP BOARD, COMPLETE (AEP, UK)			
*	A-4356-123-A	DSP BOARD, COMPLETE (G, IT)			
		*******************			
*	A-4347-005-A	PANEL BOARD, COMPLETE (AEP, UK)			
*	A-4356-121-A	PANEL BOARD, COMPLETE (G, IT)			
		*********************			
*	3-362-478-21	HOLDER (T), LED			
		< CAPACITOR >			
C102	1-124-589-11	ELECT	47uF	20%	16V
C103	1-124-589-11	ELECT	47uF	20%	16V
C104	1-136-153-00	FILM	0.01uF	5%	50V
C105	1-136-153-00	FILM	0.01uF	5%	50V
C106	1-124-589-11	ELECT	47uF	20%	16V
C107	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C108	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C109	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C110	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C111	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C125	1-124-915-11	ELECT	10uF	20%	63V
C126	1-130-475-00	MYLAR	0.0022uF	5%	50V
C127	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C128	1-124-915-11	ELECT	10uF	20%	63V
C129	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C130	1-124-915-11	ELECT	10uF	20%	63V
C131	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C132	1-124-915-11	ELECT	10uF	20%	63V
C133	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C134	1-126-947-11	ELECT	47uF	20%	35V
C136	1-126-947-11	ELECT	47uF	20%	35V
C137	1-126-947-11	ELECT	47uF	20%	35V
C138	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C139	1-164-346-11	CERAMIC CHIP	1uF		16V
C140	1-164-346-11	CERAMIC CHIP	1uF		16V
C141	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C142	1-124-915-11	ELECT	10uF	20%	63V
C143	1-126-162-11	ELECT	3.3uF	20%	50V
C144	1-126-947-11	ELECT	47uF	20%	35V
C145	1-136-157-00	FILM	0.022uF	5%	50V
C146	1-136-157-00	FILM	0.022uF	5%	50V
C147	1-124-915-11	ELECT	10uF	20%	63V
C148	1-126-162-11	ELECT	3.3uF	20%	50V
C149	1-126-947-11	ELECT	47uF	20%	35V
C150	1-136-157-00	FILM	0.022uF	5%	50V
C151	1-136-157-00	FILM	0.022uF	5%	50V
C152	1-126-947-11	ELECT	47uF	20%	35V
C153	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C154	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C155	1-164-346-11	CERAMIC CHIP	1uF		16V
C156	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C157	1-164-346-11	CERAMIC CHIP	1uF		16V
C160	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C161	1-164-346-11	CERAMIC CHIP	1uF		16V
C162	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C163	1-164-346-11	CERAMIC CHIP	1uF		16V
C166	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C169	1-164-346-11	CERAMIC CHIP	1uF		16V
C170	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C171	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C172	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C173	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C174	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C175	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C176	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C178	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C179	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C180	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C183	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C184	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C185	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C186	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C188	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C189	1-124-589-11	ELECT	47uF	20%	16V
C190	1-164-346-11	CERAMIC CHIP	1uF		16V
C192	1-124-902-00	ELECT	0.47uF	20%	50V
C193	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C195	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C196	1-124-589-11	ELECT	47uF	20%	16V
C197	1-126-947-11	ELECT	47uF	20%	35V

DSP PANEL

Ref. No.	Part No.	Description			Remark
C198	1-126-947-11	ELECT	47uF	20%	35V
C199	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C201	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C202	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C225	1-124-915-11	ELECT	10uF	20%	63V
C226	1-130-475-00	MYLAR	0.0022uF	5%	50V
C227	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C228	1-124-915-11	ELECT	10uF	20%	63V
C229	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C230	1-124-915-11	ELECT	10uF	20%	63V
C231	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C232	1-124-915-11	ELECT	10uF	20%	63V
C233	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C234	1-126-947-11	ELECT	47uF	20%	35V
C238	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C239	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C240	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C241	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C243	1-164-345-11	CERAMIC CHIP	0.082uF	10%	25V
C244	1-164-345-11	CERAMIC CHIP	0.082uF	10%	25V
C245	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C249	1-164-346-11	CERAMIC CHIP	1uF		16V
C250	1-164-346-11	CERAMIC CHIP	1uF		16V
C251	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C252	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C253	1-164-346-11	CERAMIC CHIP	1uF		16V
C254	1-164-346-11	CERAMIC CHIP	1uF		16V
C255	1-164-346-11	CERAMIC CHIP	1uF		16V
C256	1-164-346-11	CERAMIC CHIP	1uF		16V
C257	1-164-346-11	CERAMIC CHIP	1uF		16V
C258	1-164-346-11	CERAMIC CHIP	1uF		16V
C259	1-164-346-11	CERAMIC CHIP	1uF		16V
C260	1-164-346-11	CERAMIC CHIP	1uF		16V
C261	1-164-346-11	CERAMIC CHIP	1uF		16V
C262	1-164-346-11	CERAMIC CHIP	1uF		16V
C263	1-164-346-11	CERAMIC CHIP	1uF		16V
C264	1-164-346-11	CERAMIC CHIP	1uF		16V
C269	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C270	1-164-346-11	CERAMIC CHIP	1uF		16V
C271	1-164-346-11	CERAMIC CHIP	1uF		16V
C272	1-124-589-11	ELECT	47uF	20%	16V
C273	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C274	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C275	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C276	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C279	1-126-163-11	ELECT	4.7uF	20%	50V
C280	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C331	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C332	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C333	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C334	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C335	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C336	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C337	1-124-229-00	ELECT	33uF	20%	10V
C338	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C339	1-124-229-00	ELECT	33uF	20%	10V
C340	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C341	1-124-229-00	ELECT	33uF	20%	10V
C342	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C343	1-124-229-00	ELECT	33uF	20%	10V
C344	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C345	1-124-229-00	ELECT	33uF	20%	10V
C346	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C347	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C348	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C349	1-126-157-11	ELECT	10uF	20%	16V
C350	1-163-222-11	CERAMIC CHIP	5PF	0.25PF	50V
C351	1-124-229-00	ELECT	33uF	20%	10V
C352	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C353	1-124-229-00	ELECT	33uF	20%	10V
C362	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C375	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C376	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C389	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C398	1-136-165-00	FILM	0.1uF	5%	50V
C399	1-136-165-00	FILM	0.1uF	5%	50V
C501	1-124-667-11	ELECT	10uF	20%	100V
C502	1-124-667-11	ELECT	10uF	20%	100V
C504	1-124-667-11	ELECT	10uF	20%	100V
C505	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C507	1-126-157-11	ELECT	10uF	20%	16V
C508	1-124-589-11	ELECT	47uF	20%	16V
C509	1-126-163-11	ELECT	4.7uF	20%	50V
C510	1-126-301-11	ELECT	1uF	20%	50V
C511	1-126-163-11	ELECT	4.7uF	20%	50V
C513	1-163-124-00	CERAMIC CHIP	200PF	5%	50V
C521	1-124-589-11	ELECT	47uF	20%	16V
C522	1-124-589-11	ELECT	47uF	20%	16V
C523	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C524	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C525	1-126-176-11	ELECT	220uF	20%	10V
C526	1-126-157-11	ELECT	10uF	20%	16V
C527	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C528	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C529	1-124-234-00	ELECT	22uF	20%	16V
C530	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C531	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C532	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V

Ref. No.	Part No.	Description	Remark
C1201	1-163-005-11	CERAMIC CHIP 470PF 10% 50V	
C1202	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V	
C1251	1-163-005-11	CERAMIC CHIP 470PF 10% 50V	
C1252	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V	
C1270	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C1271	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C1272	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C1273	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C1301	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C1302	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
		< CONNECTOR >	
* CN501	1-568-318-11	PLUG, CONNECTOR 6P	
* CN504	1-568-320-11	PLUG, CONNECTOR 8P	
CNJ102	1-568-319-11	SOCKET, CONNECTOR 8P	
CNP101	1-566-144-11	CONNECTOR, BOARD TO BOARD 16P	
CNP103	1-573-146-11	PLUG, CONNECTOR 8P	
* CNP104	1-564-509-11	PLUG, CONNECTOR 6P	
* CNP105	1-564-521-11	PLUG, CONNECTOR 6P	
* CNP502	1-568-320-11	PLUG, CONNECTOR 8P	
CNP503	1-561-115-00	SOCKET, CONNECTOR 6P	
		< DIODE >	
D100	8-719-800-76	DIODE 1SS226	
D101	8-719-800-76	DIODE 1SS226	
D103	8-719-800-76	DIODE 1SS226	
D106	8-719-002-81	DIODE 1T363	
D107	8-719-002-81	DIODE 1T363	
D108	8-719-002-81	DIODE 1T363	
D109	8-719-002-81	DIODE 1T363	
D110	8-719-990-39	DIODE DCB010	
D111	8-719-990-39	DIODE DCB010	
D112	8-719-990-39	DIODE DCB010	
D113	8-719-990-39	DIODE DCB010	
D331	8-719-990-39	DIODE DCB010	
D333	8-719-210-39	DIODE EC10QS-04	
D334	8-719-021-49	DIODE UZM6.2X	
D501	8-719-422-46	DIODE MA8056	
D502	8-719-990-39	DIODE DCB010	
D503	8-719-990-39	DIODE DCB010	
D504	8-719-301-39	LED SEL2210S (PHONO)	
D505	8-719-301-39	LED SEL2210S (CD)	
D506	8-719-301-39	LED SEL2210S (TAPE)	
D507	8-719-301-39	LED SEL2210S (VIDEO2)	
D508	8-719-301-39	LED SEL2210S (VIDEO1)	
D509	8-719-301-39	LED SEL2210S (WAKE UP VOL SET)	
D510	8-719-301-39	LED SEL2210S (ON/STANDBY)	
D511	8-719-301-39	LED SEL2210S (TUNER)	
D512	8-719-301-39	LED SEL2210S (DAT)	
D514	8-719-301-44	LED SEL2410E-D (VIDEO2)	
D515	8-719-301-44	LED SEL2410E-D (VIDEO1)	
D521	8-719-422-46	DIODE MA8056	
D522	8-719-422-46	DIODE MA8056	
D523	8-719-990-39	DIODE DCB010	
D1201	8-719-800-76	DIODE 1SS226	
D1251	8-719-800-76	DIODE 1SS226	
D1270	8-719-990-39	DIODE DCB010	
		< TRANSISTOR >	
FET1201	8-729-232-69	TRANSISTOR 2SK208GR3	
FET1251	8-729-232-69	TRANSISTOR 2SK208GR3	
		< FLUORESCENT INDICATOR >	
FL501	1-519-654-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC101	8-759-635-26	IC M5283P	
IC102	8-759-045-15	IC CS5339-KS	
IC103	8-759-805-14	IC LC7822	
IC104	8-759-805-14	IC LC7822	
IC106	8-759-511-68	IC CXD8245M	
IC108	8-752-339-86	IC CXD2557M	
IC109	8-759-059-84	IC M37450M8-514FP	
IC110	8-759-973-04	IC MSM41464-10RS	
IC111	8-752-341-99	IC CXD2701Q	
IC112	8-752-332-80	IC CXD1160AQ	
IC113	8-759-636-55	IC M5218AFP	
IC114	8-759-636-55	IC M5218AFP	
IC115	8-759-636-55	IC M5218AFP	
IC116	8-759-636-55	IC M5218AFP	
IC117	8-759-636-55	IC M5218AFP	
IC118	8-759-636-55	IC M5218AFP	
IC119	8-759-636-55	IC M5218AFP	
IC120	8-759-636-55	IC M5218AFP	
IC121	8-759-908-17	IC TL082CPS	
IC122	8-759-982-44	IC RC79L05A	
IC123	8-759-054-64	IC CXD2905AQ	
IC124	8-759-517-14	IC MB625473PF-G	
IC125	8-759-982-21	IC RC78L05A	
IC331	8-752-349-01	IC CXD2561AM	
IC332	8-752-342-65	IC CXD2560M	
IC333	8-759-234-20	IC TC7S08F	
IC501	8-759-512-46	IC MSC7162	
IC502	8-759-512-45	IC SN755731	
IC503	8-759-512-45	IC SN755731	
IC504	8-759-512-46	IC MSC7162	
IC505	8-759-512-47	IC SN755721	

DSP PANEL

Ref. No.	Part No.	Description	Remark
IC506	8-759-059-82	IC TMP90CM40F-2611	
IC507	8-759-605-16	IC M51953BL	
IC508	8-759-059-83	IC MC68HC11L6SC400618FU	
IC509	8-759-512-48	IC XR-1092	

< COIL >

Ref. No.	Part No.	Description	Remark
L100	1-410-397-21	FERRITE BEAD INDUCTOR	
L102	1-406-416-11	COIL (OSC)	
L260	1-412-390-21	INDUCTOR CHIP 0uH	
L262	1-412-390-21	INDUCTOR CHIP 0uH	
L333	1-412-390-21	INDUCTOR CHIP 0uH	
L399	1-410-369-11	INDUCTOR CHIP 1uH	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q100	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q101	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q102	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q103	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q104	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q105	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q106	8-729-805-65	TRANSISTOR 2SA1344	
Q107	8-729-805-65	TRANSISTOR 2SA1344	
Q108	8-729-805-65	TRANSISTOR 2SA1344	
Q109	8-729-602-21	TRANSISTOR 2SC4154	
Q110	8-729-805-65	TRANSISTOR 2SA1344	
Q111	8-729-805-65	TRANSISTOR 2SA1344	
Q112	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q113	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q114	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q115	8-729-805-41	TRANSISTOR 2SC3398	
Q116	8-729-602-21	TRANSISTOR 2SC4154	
Q117	8-729-602-21	TRANSISTOR 2SC4154	
Q118	8-729-805-41	TRANSISTOR 2SC3398	
Q123	8-729-805-65	TRANSISTOR 2SA1344	
Q124	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q125	8-729-602-36	TRANSISTOR 2SA1602	
Q126	8-729-805-65	TRANSISTOR 2SA1344	
Q127	8-729-805-41	TRANSISTOR 2SC3398	
Q128	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q129	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q130	8-729-805-65	TRANSISTOR 2SA1344	
Q132	8-729-805-65	TRANSISTOR 2SA1344	
Q331	8-729-805-41	TRANSISTOR 2SC3398	
Q332	8-729-805-65	TRANSISTOR 2SA1344	
Q333	8-729-205-97	TRANSISTOR 2SC3668-Y	
Q501	8-729-602-36	TRANSISTOR 2SA1602	
Q502	8-729-602-21	TRANSISTOR 2SC4154	
Q503	8-729-805-65	TRANSISTOR 2SA1344	
Q504	8-729-805-65	TRANSISTOR 2SA1344	
Q505	8-729-602-36	TRANSISTOR 2SA1602	
Q506	8-729-805-41	TRANSISTOR 2SC3398	
Q507	8-729-602-21	TRANSISTOR 2SC4154	
Q508	8-729-602-21	TRANSISTOR 2SC4154	
Q509	8-729-602-21	TRANSISTOR 2SC4154	
Q510	8-729-602-21	TRANSISTOR 2SC4154	
Q511	8-729-602-21	TRANSISTOR 2SC4154	
Q512	8-729-602-21	TRANSISTOR 2SC4154	
Q513	8-729-602-21	TRANSISTOR 2SC4154	
Q514	8-729-602-21	TRANSISTOR 2SC4154	
Q515	8-729-602-21	TRANSISTOR 2SC4154	
Q516	8-729-602-21	TRANSISTOR 2SC4154	
Q517	8-729-602-21	TRANSISTOR 2SC4154	
Q1201	8-729-602-21	TRANSISTOR 2SC4154	
Q1251	8-729-602-21	TRANSISTOR 2SC4154	

< RESISTOR >

Ref. No.	Part No.	Description	Remark
R101	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R103	1-216-025-00	METAL CHIP 100 5% 1/10W	
R104	1-216-025-00	METAL CHIP 100 5% 1/10W	
R105	1-216-088-00	METAL CHIP 43K 5% 1/10W	
R108	1-216-025-00	METAL CHIP 100 5% 1/10W	
R109	1-216-025-00	METAL CHIP 100 5% 1/10W	
R110	1-216-041-00	METAL CHIP 470 5% 1/10W	
R111	1-216-041-00	METAL CHIP 470 5% 1/10W	
R112	1-216-041-00	METAL CHIP 470 5% 1/10W	
R113	1-216-041-00	METAL CHIP 470 5% 1/10W	
R115	1-216-041-00	METAL CHIP 470 5% 1/10W	
R116	1-216-041-00	METAL CHIP 470 5% 1/10W	
R117	1-216-041-00	METAL CHIP 470 5% 1/10W	
R118	1-216-041-00	METAL CHIP 470 5% 1/10W	
R126	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R127	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R128	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R129	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R130	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R131	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R132	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R133	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R134	1-216-043-00	METAL CHIP 560 5% 1/10W	
R135	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R136	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R137	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R138	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R139	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R140	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R141	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R142	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R143	1-216-097-00	METAL CHIP 100K 5% 1/10W	

Ref.No.	Part No.	Description				Remark
R146	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R147	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R148	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R149	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R150	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R151	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R152	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R153	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R154	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R155	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R157	1-216-103-00	METAL CHIP	180K	5%	1/10W	
R158	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R159	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R160	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R161	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R162	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R163	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R164	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R165	1-216-103-00	METAL CHIP	180K	5%	1/10W	
R166	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R167	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R168	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R169	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R170	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R171	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R172	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R173	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R174	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R175	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R176	1-216-041-00	METAL CHIP	470	5%	1/10W	
R177	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R178	1-216-025-00	METAL CHIP	100	5%	1/10W	
R179	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R180	1-216-033-00	METAL CHIP	220	5%	1/10W	
R181	1-216-033-00	METAL CHIP	220	5%	1/10W	
R182	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R183	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R184	1-216-047-00	METAL CHIP	820	5%	1/10W	
R185	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R186	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	
R187	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R188	1-216-109-00	METAL CHIP	330K	5%	1/10W	
R189	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R190	1-216-117-00	METAL CHIP	680K	5%	1/10W	
R192	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R193	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R194	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R197	1-216-073-00	METAL CHIP	10K	5%	1/10W	

Ref.No.	Part No.	Description				Remark
R198	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R199	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R200	1-216-047-00	METAL CHIP	820	5%	1/10W	
R201	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R202	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	
R203	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R204	1-216-109-00	METAL CHIP	330K	5%	1/10W	
R205	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R206	1-216-117-00	METAL CHIP	680K	5%	1/10W	
R208	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R209	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R210	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R213	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R214	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R215	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R216	1-216-033-00	METAL CHIP	220	5%	1/10W	
R217	1-216-033-00	METAL CHIP	220	5%	1/10W	
R226	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R227	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R228	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R229	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R230	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R231	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R232	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R233	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R234	1-216-043-00	METAL CHIP	560	5%	1/10W	
R235	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R236	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R237	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R238	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R239	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R240	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R241	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R242	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R243	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R250	1-216-037-00	METAL CHIP	330	5%	1/10W	
R251	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R252	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R253	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R254	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R255	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R256	1-216-025-00	METAL CHIP	100	5%	1/10W	
R257	1-216-025-00	METAL CHIP	100	5%	1/10W	
R258	1-216-041-00	METAL CHIP	470	5%	1/10W	
R259	1-216-041-00	METAL CHIP	470	5%	1/10W	
R261	1-216-017-00	METAL CHIP	47	5%	1/10W	
R264	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R265	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R266	1-216-121-00	METAL CHIP	1M	5%	1/10W	

DSP PANEL

Ref. No.	Part No.	Description				Remark
R267	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R268	1-216-025-00	METAL CHIP	100	5%	1/10W	
R269	1-216-025-00	METAL CHIP	100	5%	1/10W	
R272	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R274	1-216-041-00	METAL CHIP	470	5%	1/10W	
R275	1-216-025-00	METAL CHIP	100	5%	1/10W	
R276	1-216-025-00	METAL CHIP	100	5%	1/10W	
R277	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R279	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R280	1-216-025-00	METAL CHIP	100	5%	1/10W	
R281	1-216-025-00	METAL CHIP	100	5%	1/10W	
R282	1-216-025-00	METAL CHIP	100	5%	1/10W	
R283	1-216-025-00	METAL CHIP	100	5%	1/10W	
R284	1-216-033-00	METAL CHIP	220	5%	1/10W	
R285	1-216-025-00	METAL CHIP	100	5%	1/10W	
R286	1-216-001-00	METAL CHIP	10	5%	1/10W	
R287	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R288	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R289	1-216-033-00	METAL CHIP	220	5%	1/10W	
R290	1-216-033-00	METAL CHIP	220	5%	1/10W	
R291	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R292	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R293	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R294	1-216-025-00	METAL CHIP	100	5%	1/10W	
R295	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R296	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R297	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R298	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R301	1-216-025-00	METAL CHIP	100	5%	1/10W	
R302	1-216-025-00	METAL CHIP	100	5%	1/10W	
R306	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R307	1-216-017-00	METAL CHIP	47	5%	1/10W	
R308	1-216-041-00	METAL CHIP	470	5%	1/10W	
R309	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R310	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R311	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R312	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R313	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R314	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R317	1-216-025-00	METAL CHIP	100	5%	1/10W	
R318	1-216-295-00	METAL CHIP	0	5%	1/10W	
R319	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R321	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R330	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R331	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R332	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R333	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R334	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R335	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R336	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R337	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R338	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R339	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R340	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R341	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R342	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R343	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R344	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R345	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R346	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R347	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R348	1-216-088-00	METAL CHIP	43K	5%	1/10W	
R349	1-216-129-00	METAL CHIP	2.2M	5%	1/10W	
R350	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R352	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R353	1-216-088-00	METAL CHIP	43K	5%	1/10W	
R354	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R355	1-216-033-00	METAL CHIP	220	5%	1/10W	
R358	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R359	1-216-129-00	METAL CHIP	2.2M	5%	1/10W	
R360	1-216-001-00	METAL CHIP	10	5%	1/10W	
R364	1-216-033-00	METAL CHIP	220	5%	1/10W	
R398	1-216-076-00	METAL CHIP	13K	5%	1/10W	
R399	1-216-076-00	METAL CHIP	13K	5%	1/10W	
R501	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R502	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R503	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R504	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R505	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R506	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R507	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R508	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R511	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R514	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R516	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R518	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R520	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R521	1-216-025-00	METAL CHIP	100	5%	1/10W	
R522	1-216-025-00	METAL CHIP	100	5%	1/10W	
R523	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R524	1-216-025-00	METAL CHIP	100	5%	1/10W	
R525	1-216-025-00	METAL CHIP	100	5%	1/10W	
R526	1-216-025-00	METAL CHIP	100	5%	1/10W	
R527	1-216-025-00	METAL CHIP	100	5%	1/10W	
R528	1-216-025-00	METAL CHIP	100	5%	1/10W	
R529	1-216-025-00	METAL CHIP	100	5%	1/10W	
R530	1-216-025-00	METAL CHIP	100	5%	1/10W	
R531	1-216-025-00	METAL CHIP	100	5%	1/10W	

Ref. No.	Part No.	Description	Remark
R532	1-216-025-00	METAL CHIP 100 5% 1/10W	
R534	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R535	1-216-025-00	METAL CHIP 100 5% 1/10W	
R536	1-216-025-00	METAL CHIP 100 5% 1/10W	
R537	1-216-025-00	METAL CHIP 100 5% 1/10W	
R538	1-216-025-00	METAL CHIP 100 5% 1/10W	
R539	1-216-025-00	METAL CHIP 100 5% 1/10W	
R540	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R541	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R542	1-216-025-00	METAL CHIP 100 5% 1/10W	
R543	1-216-025-00	METAL CHIP 100 5% 1/10W	
R544	1-216-027-00	METAL CHIP 120 5% 1/10W	
R545	1-216-027-00	METAL CHIP 120 5% 1/10W	
R546	1-216-027-00	METAL CHIP 120 5% 1/10W	
R547	1-216-027-00	METAL CHIP 120 5% 1/10W	
R548	1-216-029-00	METAL CHIP 150 5% 1/10W	
R549	1-216-029-00	METAL CHIP 150 5% 1/10W	
R550	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R551	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R552	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R553	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R554	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R555	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R556	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R557	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R558	1-216-025-00	METAL CHIP 100 5% 1/10W	
R560	1-216-027-00	METAL CHIP 120 5% 1/10W	
R561	1-216-027-00	METAL CHIP 120 5% 1/10W	
R562	1-216-021-00	METAL CHIP 68 5% 1/10W	
R563	1-216-021-00	METAL CHIP 68 5% 1/10W	
R564	1-216-021-00	METAL CHIP 68 5% 1/10W	
R565	1-216-027-00	METAL CHIP 120 5% 1/10W	
R566	1-216-027-00	METAL CHIP 120 5% 1/10W	
R567	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R568	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R569	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R570	1-216-025-00	METAL CHIP 100 5% 1/10W	
R572	1-216-025-00	METAL CHIP 100 5% 1/10W	
R573	1-216-025-00	METAL CHIP 100 5% 1/10W	
R574	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R575	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R577	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R578	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R579	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R580	1-216-025-00	METAL CHIP 100 5% 1/10W	
R581	1-216-025-00	METAL CHIP 100 5% 1/10W	
R582	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R583	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R584	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R585	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R586	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R587	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R588	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R589	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R590	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R591	1-216-019-00	METAL CHIP 56 5% 1/10W	
R592	1-216-019-00	METAL CHIP 56 5% 1/10W	
R593	1-216-019-00	METAL CHIP 56 5% 1/10W	
R594	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R621	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R622	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R623	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R1201	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R1203	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R1204	1-216-689-11	METAL CHIP 39K 0.5% 1/10W	
R1205	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R1206	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R1207	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R1208	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R1209	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R1210	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R1211	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R1212	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R1213	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R1251	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R1253	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R1254	1-216-689-11	METAL CHIP 39K 0.5% 1/10W	
R1255	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R1256	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R1257	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R1258	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R1259	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R1260	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R1261	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R1262	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R1263	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R1270	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R1301	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R1302	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R1303	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R3556	1-216-033-00	METAL CHIP 220 5% 1/10W	
		< SWITCH >	
S501	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)	
S502	1-554-303-21	SWITCH, TACTILE (DISPLAY)	
S503	1-554-303-21	SWITCH, TACTILE (DSP)	
S504	1-554-303-21	SWITCH, TACTILE (WAKE UP VOL SET)	
S505	1-554-303-21	SWITCH, TACTILE (BALANCE)	

DSP PANEL ELECT CAPACITOR FLD POWER AMPLIFIER SPEAKER TRANSFORMER (A) TRANSFORMER (B) VOL

Ref. No.	Part No.	Description	Remark
S506	1-554-303-21	SWITCH, TACTILE (PRESET)	
S507	1-554-303-21	SWITCH, TACTILE (PARAMETRIC EQUALIZER)	
S508	1-554-303-21	SWITCH, TACTILE (DYNAMIC SOUND)	
S509	1-554-303-21	SWITCH, TACTILE (PRESENCE SURROUND)	
S510	1-554-303-21	SWITCH, TACTILE (ON/OFF)	
S511	1-554-303-21	SWITCH, TACTILE (AI BC)	
S512	1-554-303-21	SWITCH, TACTILE (MEMORY)	
S513	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL ◀)	
S514	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL ▲)	
S515	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL ▼)	
S516	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL ▶)	
S517	1-554-303-21	SWITCH, TACTILE (VIDEO FUNCTION)	
S518	1-554-303-21	SWITCH, TACTILE (AUDIO FUNCTION)	

< VIBRATOR >

Ref. No.	Part No.	Description	Remark
X100	1-578-667-11	VIBRATOR, CRYSTAL (49.152MHz)	
X101	1-577-253-11	VIBRATOR, CERAMIC (16.93MHz)	
X102	1-579-125-11	VIBRATOR, CERAMIC (8MHz)	
X501	1-579-351-11	VIBRATOR, CERAMIC (15MHz)	
X502	1-579-125-11	VIBRATOR, CERAMIC (8MHz)	

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* 1-642-420-11 ELECT CAPACITOR BOARD

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* A-4345-999-A FLD BOARD, COMPLETE

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* A-4347-010-A POWER AMPLIFIER BOARD, COMPLETE (AEP, UK)

* A-4347-013-A POWER AMPLIFIER BOARD, COMPLETE (G, IT)

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* 1-642-416-11 SPEAKER BOARD

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* 1-642-418-11 TRANSFORMER (A) BOARD

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* 1-642-419-11 TRANSFORMER (B) BOARD

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* 1-642-415-11 VOL BOARD

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< CAPACITOR >

Ref. No.	Part No.	Description				Remark
C601	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C602	1-126-933-11	ELECT	100uF	20%	16V	
C603	1-124-915-11	ELECT	10uF	20%	63V	
C604	1-124-915-11	ELECT	10uF	20%	63V	
C701	1-126-176-11	ELECT	220uF	20%	10V	
C702	1-126-176-11	ELECT	220uF	20%	10V	
C704	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C706	1-124-927-11	ELECT	4.7uF	20%	100V	
C707	1-126-101-11	ELECT	100uF	20%	16V	
C708	1-124-907-11	ELECT	10uF	20%	50V	
C709	1-164-159-11	CERAMIC	0.1uF		50V	
C710	1-124-910-11	ELECT	47uF	20%	50V	
C711	1-164-159-11	CERAMIC	0.1uF		50V	
C712	1-164-159-11	CERAMIC	0.1uF		50V	
C801	1-124-907-11	ELECT	10uF	20%	50V	
C802	1-162-294-31	CERAMIC (AEP, UK)	0.001uF	10%	50V	
C803	1-162-282-31	CERAMIC	100PF	10%	50V	
C804	1-124-927-11	ELECT	4.7uF	20%	100V	
C806	1-136-165-00	FILM	0.1uF	5%	50V	
C807	1-136-165-00	FILM	0.1uF	5%	50V	
C808	1-136-165-00	FILM	0.1uF	5%	50V	
C809	1-136-165-00	FILM	0.1uF	5%	50V	
C811	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C821	1-124-907-11	ELECT	10uF	20%	50V	
C822	1-162-294-31	CERAMIC (AEP, UK)	0.001uF	10%	50V	
C823	1-162-282-31	CERAMIC	100PF	10%	50V	
C824	1-124-927-11	ELECT	4.7uF	20%	100V	
C828	1-136-165-00	FILM	0.1uF	5%	50V	
C829	1-136-165-00	FILM	0.1uF	5%	50V	
C831	1-162-306-11	CERAMIC (AEP, UK)	0.01uF	20%	16V	
C851	1-124-907-11	ELECT	10uF	20%	50V	
C852	1-162-294-31	CERAMIC (AEP, UK)	0.001uF	10%	50V	
C853	1-162-282-31	CERAMIC	100PF	10%	50V	
C854	1-124-927-11	ELECT	4.7uF	20%	100V	
C856	1-136-165-00	FILM	0.1uF	5%	50V	
C857	1-136-165-00	FILM	0.1uF	5%	50V	
C858	1-136-165-00	FILM	0.1uF	5%	50V	
C859	1-136-165-00	FILM	0.1uF	5%	50V	
C861	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C871	1-124-907-11	ELECT	10uF	20%	50V	
C872	1-162-294-31	CERAMIC (AEP, UK)	0.001uF	10%	50V	
C873	1-162-282-31	CERAMIC	100PF	10%	50V	
C874	1-124-927-11	ELECT	4.7uF	20%	100V	
C878	1-136-165-00	FILM	0.1uF	5%	50V	
C879	1-136-165-00	FILM	0.1uF	5%	50V	
C881	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C891	1-136-153-00	FILM	0.01uF	5%	50V	(G, IT)
C892	1-136-153-00	FILM	0.01uF	5%	50V	(G, IT)
C893	1-136-153-00	FILM	0.01uF	5%	50V	(G, IT)
C894	1-136-153-00	FILM	0.01uF	5%	50V	(G, IT)
C901	1-126-224-11	ELECT	4700uF	20%	42V	
C902	1-126-224-11	ELECT	4700uF	20%	42V	
C905	1-136-171-00	FILM	0.33uF	5%	50V	
C906	1-136-171-00	FILM	0.33uF	5%	50V	
C923	1-124-911-11	ELECT	220uF	20%	50V	
C924	1-124-911-11	ELECT	220uF	20%	50V	
C925	1-124-122-11	ELECT	100uF	20%	50V	
C926	1-164-159-11	CERAMIC	0.1uF		50V	

ELECT CAPACITOR FLD POWER AMPLIFIER SPEAKER

TRANSFORMER (A) TRANSFORMER (B) VOL

Ref. No.	Part No.	Description	Remark
C941	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C942	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C943	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C944	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C1001	1-123-605-00	ELECT 100uF 20% 100V	
C1002	1-124-667-11	ELECT 10uF 20% 100V	
C1003	1-124-667-11	ELECT 10uF 20% 100V	
C1004	1-124-667-11	ELECT 10uF 20% 100V	
C1005	1-124-667-11	ELECT 10uF 20% 100V	
		< CONNECTOR >	
CN601	1-560-942-00	PIN, CONNECTOR 6P	
CN891	1-563-311-11	CONNECTOR, BOARD TO BOARD 10P	
* CN892	1-564-518-11	PLUG, CONNECTOR 3P	
CNJ603	1-569-656-11	HOUSING, CONNECTOR 8P	
CNJ604	1-573-147-11	HOUSING, CONNECTOR 12P	
CNJ902	1-573-095-11	SOCKET, CONNECTOR 15P	
* CNJ911	1-573-094-11	SOCKET, CONNECTOR 13P	
* CNJ912	1-573-094-11	SOCKET, CONNECTOR 13P	
CNP602	1-568-319-11	SOCKET, CONNECTOR 8P	
CNP605	1-564-507-11	PLUG, CONNECTOR 4P	
* CNP606	1-564-505-11	PLUG, CONNECTOR 2P	
* CNP801	1-564-521-11	PLUG, CONNECTOR 6P	
* CNP802	1-573-087-11	PIN, CONNECTOR 13P	
* CNP903	1-564-321-00	PIN, CONNECTOR 2P	
		< DIODE >	
D601	8-719-987-63	DIODE 1N4148M	
D602	8-719-987-63	DIODE 1N4148M	
D701	8-719-987-63	DIODE 1N4148M	
D702	8-719-987-63	DIODE 1N4148M	
D703	8-719-987-63	DIODE 1N4148M	
D704	8-719-987-63	DIODE 1N4148M	
D705	8-719-987-63	DIODE 1N4148M	
D706	8-719-987-63	DIODE 1N4148M	
D801	8-719-987-63	DIODE 1N4148M	
D802	8-719-987-63	DIODE 1N4148M	
D821	8-719-987-63	DIODE 1N4148M	
D822	8-719-987-63	DIODE 1N4148M	
D851	8-719-987-63	DIODE 1N4148M	
D852	8-719-987-63	DIODE 1N4148M	
D871	8-719-987-63	DIODE 1N4148M	
D872	8-719-987-63	DIODE 1N4148M	
D915	8-719-200-82	DIODE 11ES2	
D916	8-719-200-82	DIODE 11ES2	
D917	8-719-934-22	DIODE HZS30-2L	
D918	8-719-014-88	DIODE UZP-6.8BC	
D1001	8-719-200-82	DIODE 11ES2	
D1002	8-719-200-82	DIODE 11ES2	
D1003	8-719-200-82	DIODE 11ES2	
D1004	8-719-200-82	DIODE 11ES2	
D1005	8-719-987-63	DIODE 1N4148M	
D1006	8-719-002-73	DIODE UZL-36M	
D1007	8-719-002-73	DIODE UZL-36M	
D1008	8-719-934-26	DIODE HZS33-2L	
D1009	8-719-934-26	DIODE HZS33-2L	
D1010	8-719-934-22	DIODE HZS30-2L	
		< IC >	
IC601	8-759-820-62	IC LB1639	
IC701	8-759-111-68	IC uPC1237HA	
IC702	8-759-987-16	IC LM393P	
IC703	8-759-512-73	IC LM35DZ-SL	
IC801	8-759-069-56	IC LM3875-Q	
IC821	8-759-069-56	IC LM3875-Q	
IC851	8-759-069-56	IC LM3875-Q	
IC871	8-759-069-56	IC LM3875-Q	
		< JACK >	
J891	1-537-336-11	TERMINAL BOARD (SPEAKER)	
J892	1-573-110-11	JACK, PIN 2P (SURROUND SPEAKER)	
		< COIL >	
* L801	1-420-872-00	COIL, AIR CORE	
* L821	1-420-872-00	COIL, AIR CORE	
* L851	1-420-872-00	COIL, AIR CORE	
* L871	1-420-872-00	COIL, AIR CORE	
		< TRANSISTOR >	
Q601	8-729-801-93	TRANSISTOR 2SD1387	
Q602	8-729-900-80	TRANSISTOR DTC114ES	
Q701	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q801	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q821	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q851	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q871	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q1001	8-729-111-29	TRANSISTOR 2SD1616A-K	
Q1002	8-729-111-29	TRANSISTOR 2SD1616A-K	
		< RESISTOR >	
⚠R601	1-212-849-00	FUSIBLE 4.7 5% 1/4W	F
R602	1-249-422-11	CARBON 2.7K 5% 1/4W	
R603	1-249-422-11	CARBON 2.7K 5% 1/4W	
R604	1-249-425-11	CARBON 4.7K 5% 1/4W	
R605	1-249-425-11	CARBON 4.7K 5% 1/4W	
R606	1-249-416-11	CARBON 820 5% 1/4W	
R607	1-249-425-11	CARBON 4.7K 5% 1/4W	
R701	1-249-433-11	CARBON 22K 5% 1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

ELECT CAPACITOR **FLD** **POWER AMPLIFIER** **SPEAKER** **TRANSFORMER (A)** **TRANSFORMER (B)** **VOL** **JACK** **POWER**

Ref. No.	Part No.	Description				Remark
R702	1-249-441-11	CARBON	100K	5%	1/4W	
R703	1-249-433-11	CARBON	22K	5%	1/4W	
R704	1-249-433-11	CARBON	22K	5%	1/4W	
R705	1-249-429-11	CARBON	10K	5%	1/4W	
R706	1-249-429-11	CARBON	10K	5%	1/4W	
R707	1-249-429-11	CARBON	10K	5%	1/4W	
R708	1-249-424-11	CARBON	3.9K	5%	1/4W	
R709	1-249-427-11	CARBON	6.8K	5%	1/4W	
R710	1-249-429-11	CARBON	10K	5%	1/4W	
R711	1-249-417-11	CARBON	1K	5%	1/4W	
R712	1-249-437-11	CARBON	47K	5%	1/4W	
R713	1-249-441-11	CARBON	100K	5%	1/4W	
R714	1-249-417-11	CARBON	1K	5%	1/4W	
R715	1-249-393-11	CARBON	10	5%	1/4W	
R801	1-249-417-11	CARBON	1K	5%	1/4W	
R802	1-249-437-11	CARBON	47K	5%	1/4W	
R803	1-249-420-11	CARBON	1.8K	5%	1/4W	
R804	1-247-870-11	CARBON	43K	5%	1/4W	
⚠R805	1-217-151-00	RES, METAL PLATE	0.22		2W	
R806	1-249-417-11	CARBON	1K	5%	1/4W	
R807	1-249-431-11	CARBON	15K	5%	1/4W	
R808	1-249-441-11	CARBON	100K	5%	1/4W	
⚠R809	1-212-958-00	FUSIBLE	10	5%	1/2W	F
R810	1-249-439-11	CARBON	68K	5%	1/4W	
R811	1-249-429-11	CARBON	10K	5%	1/4W	
R821	1-249-417-11	CARBON	1K	5%	1/4W	
R822	1-249-437-11	CARBON	47K	5%	1/4W	
R823	1-249-420-11	CARBON	1.8K	5%	1/4W	
R824	1-247-874-11	CARBON	62K	5%	1/4W	
⚠R825	1-217-151-00	RES, METAL PLATE	0.22		2W	
R826	1-249-417-11	CARBON	1K	5%	1/4W	
R827	1-249-431-11	CARBON	15K	5%	1/4W	
R828	1-249-441-11	CARBON	100K	5%	1/4W	
⚠R829	1-212-958-00	FUSIBLE	10	5%	1/2W	F
R830	1-249-437-11	CARBON	47K	5%	1/4W	
R831	1-249-429-11	CARBON	10K	5%	1/4W	
R851	1-249-417-11	CARBON	1K	5%	1/4W	
R852	1-249-437-11	CARBON	47K	5%	1/4W	
R853	1-249-420-11	CARBON	1.8K	5%	1/4W	
R854	1-247-870-11	CARBON	43K	5%	1/4W	
⚠R855	1-217-151-00	RES, METAL PLATE	0.22		2W	
R856	1-249-417-11	CARBON	1K	5%	1/4W	
R857	1-249-431-11	CARBON	15K	5%	1/4W	
R858	1-249-441-11	CARBON	100K	5%	1/4W	
⚠R859	1-212-958-00	FUSIBLE	10	5%	1/2W	F
R860	1-249-438-11	CARBON	56K	5%	1/4W	
R861	1-249-429-11	CARBON	10K	5%	1/4W	
R871	1-249-417-11	CARBON	1K	5%	1/4W	
R872	1-249-437-11	CARBON	47K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R873	1-249-420-11	CARBON	1.8K	5%	1/4W	
R874	1-247-874-11	CARBON	62K	5%	1/4W	
⚠R875	1-217-151-00	RES, METAL PLATE	0.22		2W	
R876	1-249-417-11	CARBON	1K	5%	1/4W	
R877	1-249-431-11	CARBON	15K	5%	1/4W	
R878	1-249-441-11	CARBON	100K	5%	1/4W	
⚠R879	1-212-958-00	FUSIBLE	10	5%	1/2W	F
R880	1-249-436-11	CARBON	39K	5%	1/4W	
R881	1-249-429-11	CARBON	10K	5%	1/4W	
R891	1-247-727-11	CARBON	10	5%	1/2W	(G, IT)
R892	1-247-727-11	CARBON	10	5%	1/2W	(G, IT)
R893	1-247-727-11	CARBON	10	5%	1/2W	(G, IT)
R894	1-247-727-11	CARBON	10	5%	1/2W	(G, IT)
R917	1-247-713-11	CARBON	1K	5%	1/4W	
R918	1-249-441-11	CARBON	100K	5%	1/4W	
⚠R1001	1-212-966-00	FUSIBLE	22	5%	1/2W	F
R1002	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1003	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1004	1-247-903-00	CARBON	1M	5%	1/4W	
R1005	1-247-902-11	CARBON	910K	5%	1/4W	
R1006	1-249-433-11	CARBON	22K	5%	1/4W	
⚠R1901	1-219-134-11	FUSIBLE	0.1	5%	1/4W	F
⚠R1902	1-219-134-11	FUSIBLE	0.1	5%	1/4W	F
⚠R1905	9-910-999-33	FUSIBLE	0.22	5%	1/4W	F
⚠R1906	9-910-999-33	FUSIBLE	0.22	5%	1/4W	F

< VARIABLE RESISTOR >

RV601 1-241-803-11 RES, VAR, CARBON (WITH MOTOR) 10K (VOLUME)

< RELAY >

RY1001 1-515-886-11 RELAY

****

* 1-642-413-11 JACK BOARD

****

* A-4347-007-A POWER BOARD, COMPLETE (AEP, UK)
* A-4347-012-A POWER BOARD, COMPLETE (G, IT)

****

* 1-533-213-31 HOLDER, FUSE
* 3-309-144-21 HEAT SINK
7-682-547-04 SCREW +BVTT 3X6 (S)

< CAPACITOR >

Ref. No.	Part No.	Description			
C1	1-124-915-11	ELECT	10uF	20%	63V
C2	1-162-306-11	CERAMIC	0.01uF	20%	16V
C3	1-162-306-11	CERAMIC	0.01uF	20%	16V
C5	1-136-153-00	FILM	0.01uF	5%	50V
C7	1-162-306-11	CERAMIC	0.01uF	20%	16V
C8	1-162-294-31	CERAMIC	0.001uF	10%	50V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description				Remark
C651	1-162-282-31	CERAMIC	100PF	10%	50V	(AEP, UK)
C651	1-162-286-31	CERAMIC	220PF	10%	50V	(G, IT)
C652	1-162-207-31	CERAMIC	22PF	5%	50V	(G, IT)
C652	1-162-215-31	CERAMIC	47PF	5%	50V	(AEP, UK)
C653	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C654	1-161-379-00	CERAMIC	0.01uF	20%	25V	(G, IT)
C654	1-162-294-31	CERAMIC	0.001uF	10%	50V	(AEP, UK)
C655	1-124-282-00	ELECT	22uF	20%	25V	
C656	1-124-119-00	ELECT	330uF	20%	16V	
C661	1-162-282-31	CERAMIC	100PF	10%	50V	(AEP, UK)
C661	1-162-286-31	CERAMIC	220PF	10%	50V	(G, IT)
C662	1-162-207-31	CERAMIC	22PF	5%	50V	(G, IT)
C662	1-162-215-31	CERAMIC	47PF	5%	50V	(AEP, UK)
C663	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C664	1-161-379-00	CERAMIC	0.01uF	20%	25V	(G, IT)
C664	1-162-294-31	CERAMIC	0.001uF	10%	50V	(AEP, UK)
C665	1-124-282-00	ELECT	22uF	20%	25V	
C666	1-124-119-00	ELECT	330uF	20%	16V	
C903	1-126-943-11	ELECT	2200uF	20%	25V	
C904	1-126-943-11	ELECT	2200uF	20%	25V	
C907	1-136-165-00	FILM	0.1uF	5%	50V	
C908	1-136-165-00	FILM	0.1uF	5%	50V	
C909	1-124-477-11	ELECT	47uF	20%	25V	
C910	1-124-477-11	ELECT	47uF	20%	25V	
C911	1-124-915-11	ELECT	10uF	20%	63V	
C912	1-124-915-11	ELECT	10uF	20%	63V	
C913	1-124-915-11	ELECT	10uF	20%	63V	
C914	1-126-937-11	ELECT	4700uF	20%	16V	(AEP, UK)
C915	1-124-915-11	ELECT	10uF	20%	63V	
C916	1-124-915-11	ELECT	10uF	20%	63V	
C917	1-126-947-11	ELECT	47uF	20%	35V	
C918	1-124-915-11	ELECT	10uF	20%	63V	
C1101	1-126-948-11	ELECT	100uF	20%	35V	
C1102	1-124-915-11	ELECT	10uF	20%	63V	
C1103	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C2000	1-101-006-00	CERAMIC	0.047uF		50V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CN902	1-564-506-11	PLUG, CONNECTOR 3P	
* CN904	1-564-506-11	PLUG, CONNECTOR 3P	
* CNJ1	1-580-739-11	SOCKET, CONNECTOR 15P (SYSTEM CONTROL 1)	
* CNJ2	1-580-740-11	SOCKET, CONNECTOR 17P (SYSTEM CONTROL 2)	
* CNJ3	1-563-534-11	CONNECTOR, BOARD TO BOARD 16P	
* CNP7	1-564-499-11	PIN, CONNECTOR 6P	
* CNP8	1-564-498-11	PIN, CONNECTOR 5P	
* CNP903	1-564-321-00	PIN, CONNECTOR 2P	
* CNP905	1-573-087-11	PIN, CONNECTOR 13P	
CNP906	1-573-109-11	PIN, CONNECTOR 15P	
* CNP907	1-506-981-11	PIN, CONNECTOR 10P	
CNP908	1-568-317-11	SOCKET, CONNECTOR 6P	
* CNP909	1-573-148-11	PLUG, CONNECTOR 12P	
* CNP910	1-564-338-00	PIN, CONNECTOR 4P	
* CNP911	1-564-505-11	PLUG, CONNECTOR 2P	

< DIODE >

Ref. No.	Part No.	Description		Remark
D891	8-719-987-63	DIODE	1N4148M	
D892	8-719-987-63	DIODE	1N4148M	
D901	8-719-510-68	DIODE	D5SBA20F01	
D902	8-719-987-63	DIODE	1N4148M	
D903	8-719-987-63	DIODE	1N4148M	
D904	8-719-200-82	DIODE	11ES2	
D905	8-719-200-82	DIODE	11ES2	
D906	8-719-200-82	DIODE	11ES2	
D907	8-719-200-82	DIODE	11ES2	
D908	8-719-200-82	DIODE	11ES2	
D909	8-719-200-82	DIODE	11ES2	
D910	8-719-987-63	DIODE	1N4148M	
D911	8-719-933-36	DIODE	HZS6B1L	
D919	8-719-987-63	DIODE	1N4148M	
D920	8-719-987-63	DIODE	1N4148M	
D1101	8-719-200-82	DIODE	11ES2	
D1102	8-719-200-82	DIODE	11ES2	

< IC >

Ref. No.	Part No.	Description		Remark
IC1	8-749-921-11	IC	GP1F32R (DIGITAL OPTICAL CD IN)	
IC2	8-749-921-11	IC	GP1F32R (DIGITAL OPTICAL DAT IN)	
IC3	8-749-921-12	IC	GP1F32T (DIGITAL OPTICAL DAT OUT)	
IC651	8-759-634-50	IC	M5218AL	
IC901	8-759-602-66	IC	M5230L-A	

< JACK >

Ref. No.	Part No.	Description	Remark
J2	1-569-662-11	JACK, PIN 1P (SUPER WOOFER OUT)	
J651	1-562-837-21	JACK (HEADPHONES)	
⚠J901	1-526-931-11	INLET, AC (~ AC IN)	

< COIL >

Ref. No.	Part No.	Description	Remark
L1	1-410-397-21	FERRITE BEAD INDUCTOR	

< LINE FILTER >

Ref. No.	Part No.	Description	Remark
⚠L901	1-424-485-11	FILTER, LINE	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

JACK POWER

< TRANSISTOR >

Ref. No.	Part No.	Description		Remark
Q651	8-729-141-30	TRANSISTOR	2SC3623A-LK	
Q652	8-729-900-61	TRANSISTOR	DTA114ES	
Q661	8-729-141-30	TRANSISTOR	2SC3623A-LK	
Q901	8-729-209-15	TRANSISTOR	2SD2012	
Q902	8-729-141-83	TRANSISTOR	2SB1094-LK	
Q903	8-729-900-80	TRANSISTOR	DTC114ES	
Q905	8-729-620-05	TRANSISTOR	2SC2603-EF	
Q906	8-729-620-05	TRANSISTOR	2SC2603-EF	
Q908	8-729-801-84	TRANSISTOR	2SB1013-4	
Q909	8-729-111-29	TRANSISTOR	2SD1616A-K	
Q910	8-729-111-29	TRANSISTOR	2SD1616A-K	
Q911	8-729-620-05	TRANSISTOR	2SC2603-EF	
Q1101	8-729-111-29	TRANSISTOR	2SD1616A-K	
Q1601	8-729-141-30	TRANSISTOR	2SC3623A-LK	
Q1602	8-729-141-30	TRANSISTOR	2SC3623A-LK	

< RESISTOR >

Ref. No.	Part No.	Description				Remark
⚠R2	9-910-999-33	FUSIBLE	0.22	5%	1/4W	F
⚠R3	9-910-999-33	FUSIBLE	0.22	5%	1/4W	F
R5	1-249-409-11	CARBON	220	5%	1/4W	
R651	1-249-433-11	CARBON	22K	5%	1/4W	
R652	1-247-881-00	CARBON	120K	5%	1/4W	
R653	1-249-405-11	CARBON	100	5%	1/4W	
R654	1-249-419-11	CARBON	1.5K	5%	1/4W	
R655	1-249-422-11	CARBON	2.7K	5%	1/4W	
R656	1-249-405-11	CARBON	100	5%	1/4W	
R657	1-249-441-11	CARBON	100K	5%	1/4W	
R658	1-249-429-11	CARBON	10K	5%	1/4W	
R661	1-249-433-11	CARBON	22K	5%	1/4W	
R662	1-247-881-00	CARBON	120K	5%	1/4W	
R663	1-249-405-11	CARBON	100	5%	1/4W	
R666	1-249-405-11	CARBON	100	5%	1/4W	
R668	1-249-429-11	CARBON	10K	5%	1/4W	
R902	1-247-903-00	CARBON	1M	5%	1/4W	
R905	1-249-413-11	CARBON	470	5%	1/4W	
R906	1-249-434-11	CARBON	27K	5%	1/4W	
R907	1-249-425-11	CARBON	4.7K	5%	1/4W	
R908	1-249-431-11	CARBON	15K	5%	1/4W	
R909	1-249-431-11	CARBON	15K	5%	1/4W	
R910	1-249-419-11	CARBON	1.5K	5%	1/4W	
R911	1-249-429-11	CARBON	10K	5%	1/4W	
R912	1-249-429-11	CARBON	10K	5%	1/4W	
R913	1-249-429-11	CARBON	10K	5%	1/4W	
R914	1-249-429-11	CARBON	10K	5%	1/4W	
R919	1-249-429-11	CARBON	10K	5%	1/4W	
R920	1-249-429-11	CARBON	10K	5%	1/4W	
⚠R921	1-215-863-11	METAL OXIDE	100	5%	1W	F
R922	1-249-429-11	CARBON	10K	5%	1/4W	
R923	1-249-425-11	CARBON	4.7K	5%	1/4W	
R924	1-249-429-11	CARBON	10K	5%	1/4W	
R925	1-249-429-11	CARBON	10K	5%	1/4W	
R926	1-249-429-11	CARBON	10K	5%	1/4W	
⚠R928	1-216-425-11	METAL OXIDE	56	5%	1W	F
R930	1-249-417-11	CARBON	1K	5%	1/4W	
R931	1-249-441-11	CARBON	100K	5%	1/4W	
R932	1-249-429-11	CARBON	10K	5%	1/4W	
R1101	1-249-429-11	CARBON	10K	5%	1/4W	

< RELAY >

Ref. No.	Part No.	Description
RY801	1-515-790-11	RELAY
RY802	1-515-790-11	RELAY
RY901	1-515-626-11	RELAY
RY902	1-515-626-11	RELAY

****

MISCELLANEOUS
****

Ref. No.	Part No.	Description	
⚠F901	1-532-286-00	FUSE, TIME-LAG (T2.5A)	
IC902	8-759-231-53	IC	M5F7805L
M801	1-541-860-11	MOTOR, DC FAN	
⚠PT901	1-450-881-11	TRANSFORMER, POWER (UK)	
⚠PT901	1-450-883-11	TRANSFORMER, POWER (AEP,G,IT)	
Q904	8-729-209-15	TRANSISTOR	2SD2012

****

****
HARDWARE LIST
****

Ref. No.	Part No.	Description
#1	7-685-203-19	SCREW +KTP 2X5 TYPE2 NON-SLIT
#2	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S
#3	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S
#4	7-685-132-19	SCREW +PTPWH 2.6X5 (TYPE2)
#5	7-682-547-04	SCREW +BVTT 3X6 (S)
#6	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#7	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3
#8	7-682-547-09	SCREW +BVTT 3X6 (S)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Sony Corporation
Audio Group

English
92G0459-1
Printed in Japan
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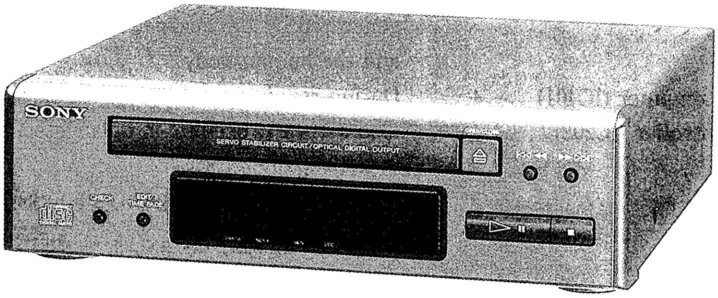
Published by Customer Relations and Service Group

CDP-H6700

SERVICE MANUAL

AEP Model
UK Model



This set is the CD player section in MHC-6700.

Model Name Using Similar Mechanism	CDP-H3700
CD Mechanism Type	CDM13BA-5BD3
Optical Pick-Up Block Type	BU-5BD3

SPECIFICATIONS

System	Compact disc digital audio system
Laser	Semiconductor laser (λ = 780 nm) Emission duration: continuous
Laser output	Max. 44.6 μW* * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.

Design and specifications subject to change without notice.

For the United kingdom and European countries.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the rear exterior.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

COMPACT DISC PLAYER

SONY®

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NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

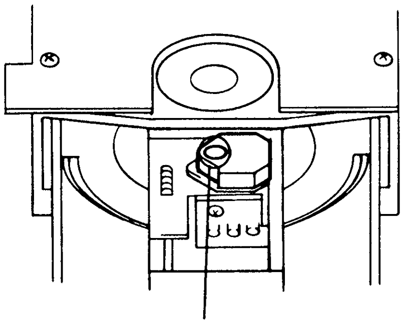
The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential diference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30cm away from the objective lens.

LASER DIODE AND FOCUS SERCH OPERATION CHECK

1. Make POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objective lens.

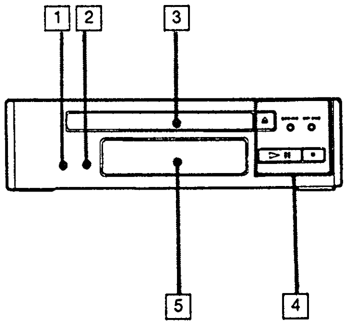


- Confirm that laser beam is spread.
- Up and down motion of the objective lens. (3 times)

SECTION 1
GENERAL

This section is extracted from instruction manual.

1-1. PARTS IDENTIFICATION



1. CHECK button ㊻
2. EDIT/TIME FADE button (106) (118)
3. Disc tray
4. CD operation buttons
   ≙ : OPEN/CLOSE
   ▷II : Play/pause
   I◁◁ ◀◀ ▶▶ ▷▷I : Manual search (when kept depressed) /Automatic Music Sensor (when pressed)
5. Display window

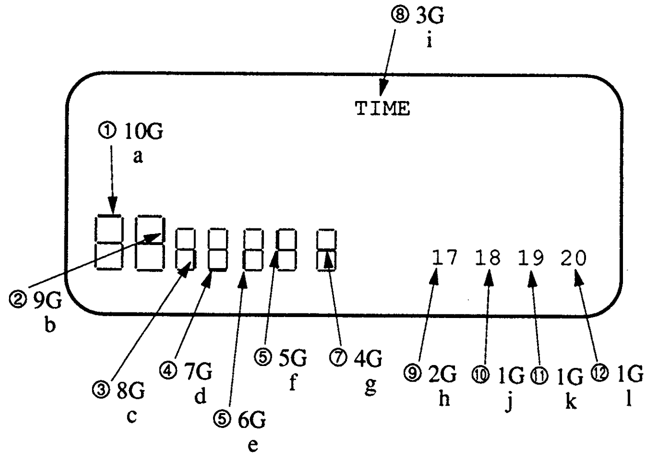
SECTION 2
TEST MODES

2-1. Test Mode of Display Microcomputer (IC401)

Connect Pin ㉝ of IC401 to ground and turn ON the POWER switch, thus you can test the following 3 tests.

(1) All FL tube ON
This mode is actuated immediately after turning ON the POWER switch.

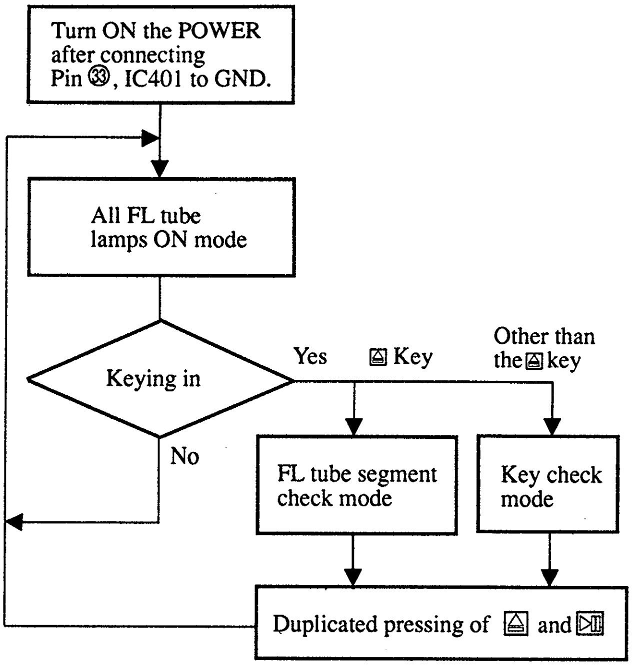
(2) FL tube segment check
This mode is actuated by pressing the ⏏ key in the state of (1). Every time the ⏏ key is pressed, the segments are indicated sequentially from the segment a. When the last l segment is displayed, keying in is no longer accepted while continuing the lighting-up state of the last segment. Conditions are normal provided all lamps light up in the following order.



⑧ 3G
i
TIME
① 10G
a
17 18 19 20
② 9G
b
③ 8G
c
④ 7G
d
⑤ 6G
e
⑤ 5G
f
⑦ 4G
g
⑨ 2G
h
⑩ 1G
j
⑪ 1G
k
⑫ 1G
l

(3) KEY check
This mode is effected by pressing the ⏏ key in the state of (1), while indicating "1." Every time a new key is pressed subsequently, the indicated number is incremented. Conditions are normal provided "7" is indicated when all types of keys are pressed. Even if a key is pressed again, it is not counted.

* To leave the mode (2) or (3), press the ⏏ and ▷II keys in duplication, thereby the mode returning to all ON mode.



Turn ON the POWER after connecting Pin ㉝, IC401 to GND.
All FL tube lamps ON mode
Keying in
Yes
⏏ Key
Other than the ⏏ key
No
FL tube segment check mode
Key check mode
Duplicated pressing of ⏏ and ▷II

2-2. Test Modes of CD System Controller (IC202)

(1) ADJUST mode
When this mode is effected, the machine is operated normally except for the following.

- When pin ⑲, IC201 (ADJ) is set to "L" after turning ON the POWER switch:

1. GFS is no longer monitored during PLAY, PAUSE or SEARCH, while not stopping even with GFS remaining still at "L" (NG).
2. No high-speed feeding is activated during SEARCH.
3. Focus gain is reset to normal gain during PLAY (normally, the gain is lowered to reduce noise when FOCUS is locked).

- When Pin ⑬, IC201 (AFADJ) is set to "L" after turning ON the POWER switch:

1. Regardless of Pin ⑲ (ADJ) of the CLV-S fixed function, the CLV mode during PLAY becomes CLV-S (rough servo) only while Pin e remains "L".

(2) AFADJUST mode
In this mode, it is possible to check the interface between the display micon (IC401) and CD syscon (IC201).

- Set Pin ⑬, IC201 (AFADJ) to "L" before turning ON the POWER switch.

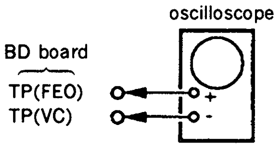
1. Every time the ⏏ key is pressed after turning On the POWER switch, indication on the FL tube is switched correspondingly. Conditions are normal provided the indication repeats the 4 patterns including all lamp ON.

SECTION 3
ELECTRICAL BLOCK CHECKING

Note:

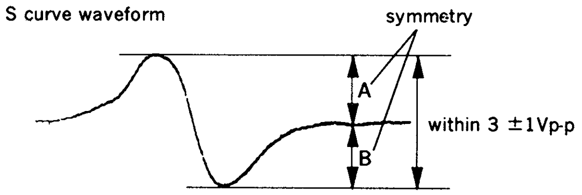
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check


oscilloscope
BD board
TP(FEO)
TP(VC)
+
-

Procedure:

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

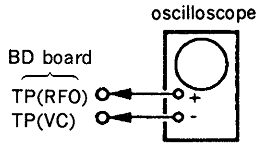

S curve waveform
symmetry
A
B
within 3 ±1Vp-p

5. After check, remove the lead wire connected in step 2.

Note: ● Try to mesure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.

● Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

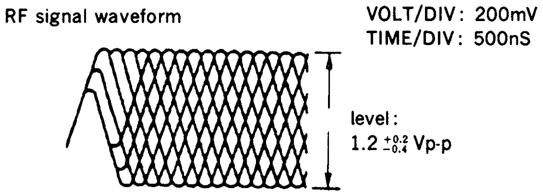

oscilloscope
BD board
TP(RFO)
TP(VC)
+
-

Procedure:

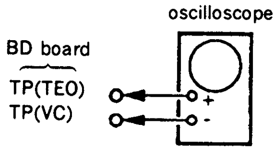
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note:

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

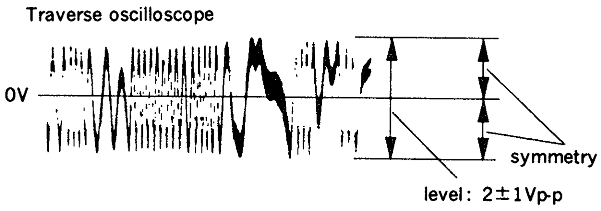

RF signal waveform
VOLT/DIV: 200mV
TIME/DIV: 500nS
level:
1.2 +0.2 −0.4 Vp-p

E-F Balance Check


oscilloscope
BD board
TP(TEO)
TP(VC)
+
-

Procedure:

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

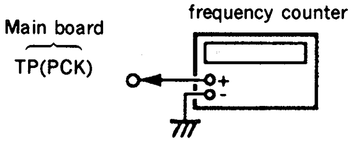

Traverse oscilloscope
0V
symmetry
level: 2±1Vp-p

6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure:

1. Connect frequency counter to test point (PCK) with lead wire.


Main board
TP(PCK)
frequency counter
+
-

2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

Focus/Tracking Gain

This gain has a margin, so even if it is slightly off.

There is no problem.

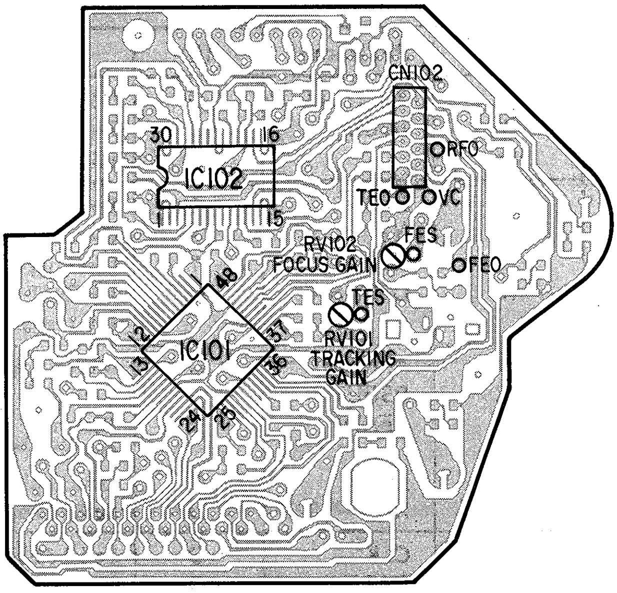
Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

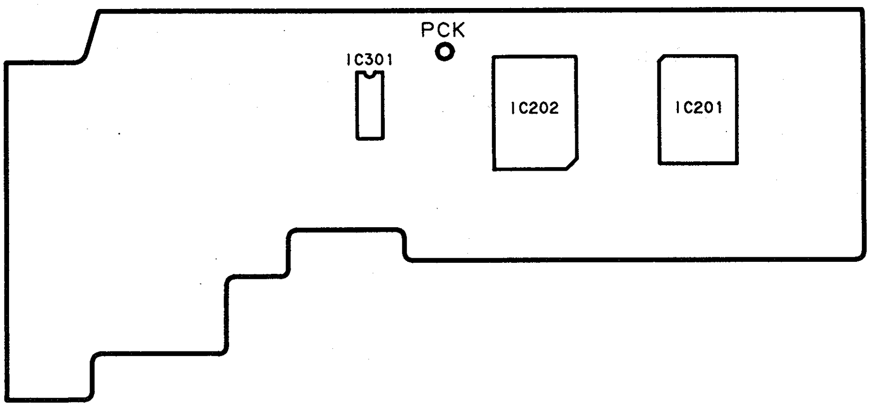
Checking Location:

【BD Board】

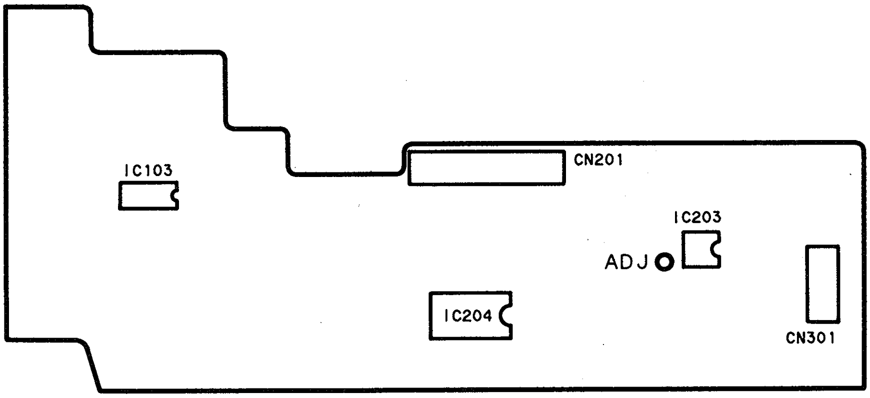
—Conductor Side—


CN102
RFO
30
16
IC102
1
15
TEO
VC
RV102
FOCUS GAIN
FES
FEO
48
TES
12
IC101
37
RV101
TRACKING
GAIN
13
36
24
25

【MAIN Board】 —Component Side—


PCK
IC301
IC202
IC201

【MAIN Board】 —Conductor Side—


IC103
CN201
IC203
ADJ
IC204
CN301

SECTION 4
DIAGRAMS

4-1. PIN DESCRIPTION

• IC201 CD System Controller (μPD75116GF-F21-3BE)

Functions effected by the captioned controller include IC101 (RF signal processing, servo), IC202 (DSP, digital filter) and loading control in the CD unit, data exchange with IC401 (display controller), audio bus entry, etc.

Pin No.	Pin Name	I/O	Description
1-2	G MUTE, GCLR	O	Not in use with the model (open).
3	DPCLK	O	Display data transfer clock output to IC401 (display micon)
4-6		O	IC204 (CXD2554M) control output.
7	$\overline{\text{RESET}}$	I	System reset input. "L": Reset
8	X2	I	Clock input
9	X1	I	Clock input (4 MHz)
10	DFCT SW	O	DEFECT circuit ON/OFF switching output of IC101 (CXA1372Q). It is turned OFF ("H") to focus-search the DISC flaw detection circuit.
11	AMUTE	O	Muting control output. "H": Mute
12	BSOUT	O	Audio bus output
13	AFADJ	I	Test mode input. Various test operations are effected upon "L" after turning ON the POWER.
14	LDON	O	Optical pickup laser diode ON/OFF switching output. "H": ON
15	XLT	O	Serial data latch output to IC202 (CXD2500AQ)
16	CLK	O	Serial data transfer clock output to IC202 (CXD2500AQ)
17	DATA	O	Serial data output to IC202 (CXD2500AQ)
18	MODE	I	Not in use with the model (GND)
19	ADJ	I	Test mode input. Upon "L," GFS checking is disabled while continuously rotating the spindle no matter whether frame synch is issued during PLAY, PAUSE or SEARCH.
20	GFS	I	GFS signal input from IC202 (CXD2500AQ). "L": NG "H": OK
21	FOK	I	Focus OK signal input from IC101 (CXA1372Q). "H": OK
22 - 23		O	Not in use with the model (open)
24	LODOUT	O	Output to rotate M291 (loading motor) in the loading out direction. *1
25	LODIN	O	Output to rotate M291 (loading motor) in the loading in direction. *1
26	Vss	–	Power terminal (GND)
27	$\overline{\text{IN SW}}$	I	S292 (Loading in switch) input
28	$\overline{\text{OUT SW}}$	I	S291 (Loading out switch) input
29	KEY REQ	I	Key data request input from IC401 (display controller)
30	BS IN	I	Audio bus input
31 - 36			Not in use with the model (GND)
37	SENS	I	SENS input from IC101 (CXA1372Q) and IC202 (CXD2500AQ)
38	$\overline{\text{TIMER}}$	I	Not in use with the model (pull up)
39	D/F 16BIT	I	IC202 (CXD2500AQ) digital filter mode setting input. It is fixed at 16 bit, 4fs with
		I	the model (pull up).
40			Not in use with the model (GND)
41	SUBQ	I	Subcode Q data input from IC202 (CXD2500AQ)
42		O	Not in use with the model (open)
43	SQCLK	O	Subcode Q data readout clock output to IC202 (CXD2500AQ)
44	SCOR	I	Subcode sync S0 + S1 detection input from IC202 (CXD2500AQ)
45 - 56		O	Not in use with the model (open)
57	N.C.	I	Not in use with the model (+5V)
58	VDD	–	Power terminal (+5V)
59 - 62	DPDATA3-0	I/O	Key data input and display data output with IC401 (display controller)
63 - 64		O	Not in use with the model (open)

*1 Loading motor control

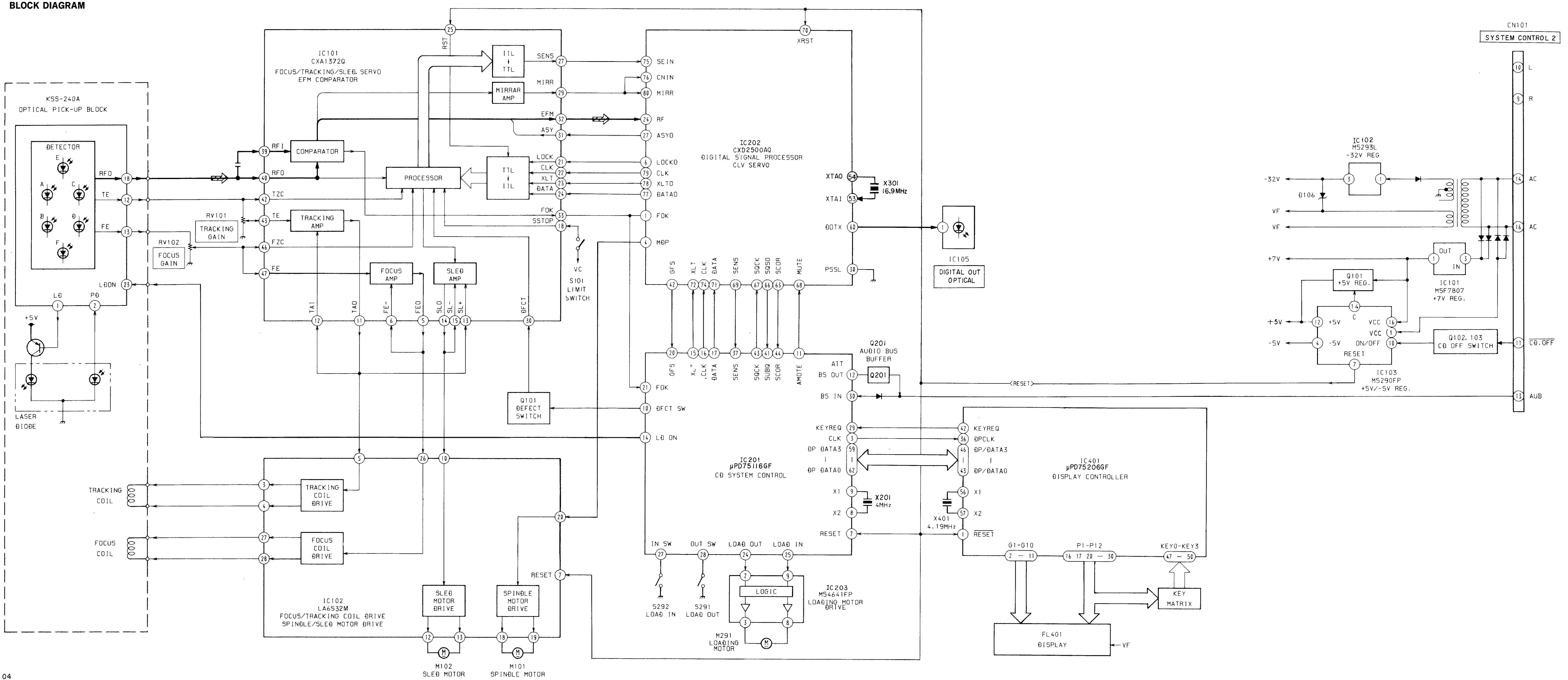
	IN	OUT	BRAKE
LODOUT ㉔	L	H	H
LODIN ㉕	H	L	H

• IC401 Display controller (μPD75206GF-716-3BE)

In charge of displaying the FL tube and keying in, it exchanges data with the IC201 (CD system controller) in 4-bit parallel mode.

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{RESET}}$	I	System reset input. "L": Reset
2 - 11	G1-10	O	Digital output to the FL tube
12 - 15		O	Not in use with the model (open)
16, 17	l, k	O	FL tube segment output
18	VLOAD	–	Power supply for the FL tube controller (builtin) (-32V)
19	VPRE	–	Power supply for the FL tube predriver (-3.5V)
20 - 25	j ~ e	O	FL tube segment output
26	V_{DD}	–	Power terminal (+5V)
27, 28	d, c	O	FL tube segment output
29, 30	b, a	O	FL tube segment, key scan output
31, 32		I	Not in use with the model (GND)
33	$\overline{\text{TEST}}$	I	Test mode input. "L": Test mode
34	SELECT	I	Not in use with the model (pull up)
35	BSIN	I	Not in use with the model (pull up)
36	DPCLK	I	Display data transfer clock input from IC201 (CD system controller)
37, 38		I	Not in use with the model (pull up)
39		O	Not in use with the model (pull up)
40, 41		O	Not in use with the model (open)
42	KEY REQ	O	Key data request output to IC201 (CD system controller)
43 - 46	DPDATA0-3	I/O	Key data output and display data input with IC201 (CD system controller)
47 - 50	KEY0-3	I	Key data input
51, 52		I	Not in use with the model (pull up)
53, 54		I	Not in use with the model (GND)
55		O	Not in use with the model (open)
56	X1	I	System clock input (4.19 MHz)
57	X2	I	System clock input
58	Vss	–	Power supply terminal (GND)
59		I	Not in use with the model (GND)
60 - 64		O	Not in use with the model (open)

4-2. BLOCK DIAGRAM


KSS-240A
OPTICAL PICK-UP BLOCK
DETECTOR
E
A
C
B
D
F
RFO
TE
FE
LD
PD
+5V
LASER
DIODE
IC101
CXA1372Q
FOCUS/TRACKING/SLED, SERVO
EFM COMPARATOR
RST
RFI
RFO
TZC
TE
FZC
FE
LDON
COMPARATOR
PROCESSOR
TRACKING AMP
FOCUS AMP
SLED AMP
TTL → I²L
MIRRAR AMP
I²L → TTL
SENS
MIRR
EFM
ASY
LOCK
CLK
XLT
DATA
FOK
SSTOP
DFCT
TAI
TAO
FE-
FEO
SLO
SL-
SL+
RV101
TRACKING GAIN
RV102
FOCUS GAIN
VC
S101
LIMIT
SWITCH
Q101
DEFECT
SWITCH
IC202
CXD2500AQ
DIGITAL SIGNAL PROCESSOR
CLV SERVO
XRST
SEIN
CNIN
MIRR
RF
ASYO
LOCKO
CLK
XLTO
DATAO
FOK
MDP
XTAO
XTAI
X301
16.9MHz
DOTX
PSSL
GFS
XLT
CLK
DATA
SENS
SQCK
SQSO
SCOR
MUTE
IC105
DIGITAL OUT
OPTICAL
Q201
AUDIO BUS
BUFFER
Q201
ATT
BS OUT
BS IN
IC201
μPD75116GF
CD SYSTEM CONTROL
GFS
XLT
CLK
DATA
SENS
SQCK
SUBQ
SCOR
AMUTE
FOK
DFCT SW
LD ON
KEYREQ
CLK
DP DATA3
DP DATA0
X1
X2
X201
4MHz
RESET
IN SW
OUT SW
LOAD OUT
LOAD IN
S292
LOAD IN
S291
LOAD OUT
LOGIC
IC203
M54641FP
LOADING MOTOR
DRIVE
M291
LOADING
MOTOR
M
IC401
μPD75206GF
DISPLAY CONTROLLER
KEYREQ
DPCLK
DP/DATA3
DP/DATA0
X1
X2
X401
4.19MHz
RESET
G1-G10
2 — 11
P1-P12
16 17 20 — 30
KEY0-KEY3
47 — 50
KEY
MATRIX
FL401
DISPLAY
VF
TRACKING
COIL
FOCUS
COIL
TRACKING
COIL
DRIVE
FOCUS
COIL
DRIVE
SLED
MOTOR
DRIVE
SPINDLE
MOTOR
DRIVE
RESET
IC102
LA6532M
FOCUS/TRACKING COIL DRIVE
SPINDLE/SLED MOTOR DRIVE
M
M
M102
SLED MOTOR
M101
SPINDLE MOTOR
CN101
SYSTEM CONTROL 2
L
R
AC
AC
CD OFF
AUB
IC102
M5293L
-32V REG
-32V
D106
VF
VF
+7V
OUT
IN
IC101
M5F7807
+7V REG.
Q101
+5V REG.
C
+5V
+5V
VCC
VCC
-5V
-5V
ON/OFF
RESET
IC103
M5290FP
+5V/-5V REG.
Q102, 103
CD OFF SWITCH
RESET

04

• Semiconductor Location

Except BD Board

Ref. No.	Location
D101	C-7
D102	C-6
D103	C-7
D104	D-9
D106	C-8
D113	C-2
D131	C-5
D132	C-2
D201	H-5
D206	H-6
D401	E-16
D402	F-17
D403	E-13
IC101	D-6
IC102	C-8
IC103	D-6
IC105	B-7
IC201	H-3
IC202	F-3
IC203	H-6
IC401	E-14
Q101	D-5
Q102	C-5
Q103	B-6
Q201	H-5

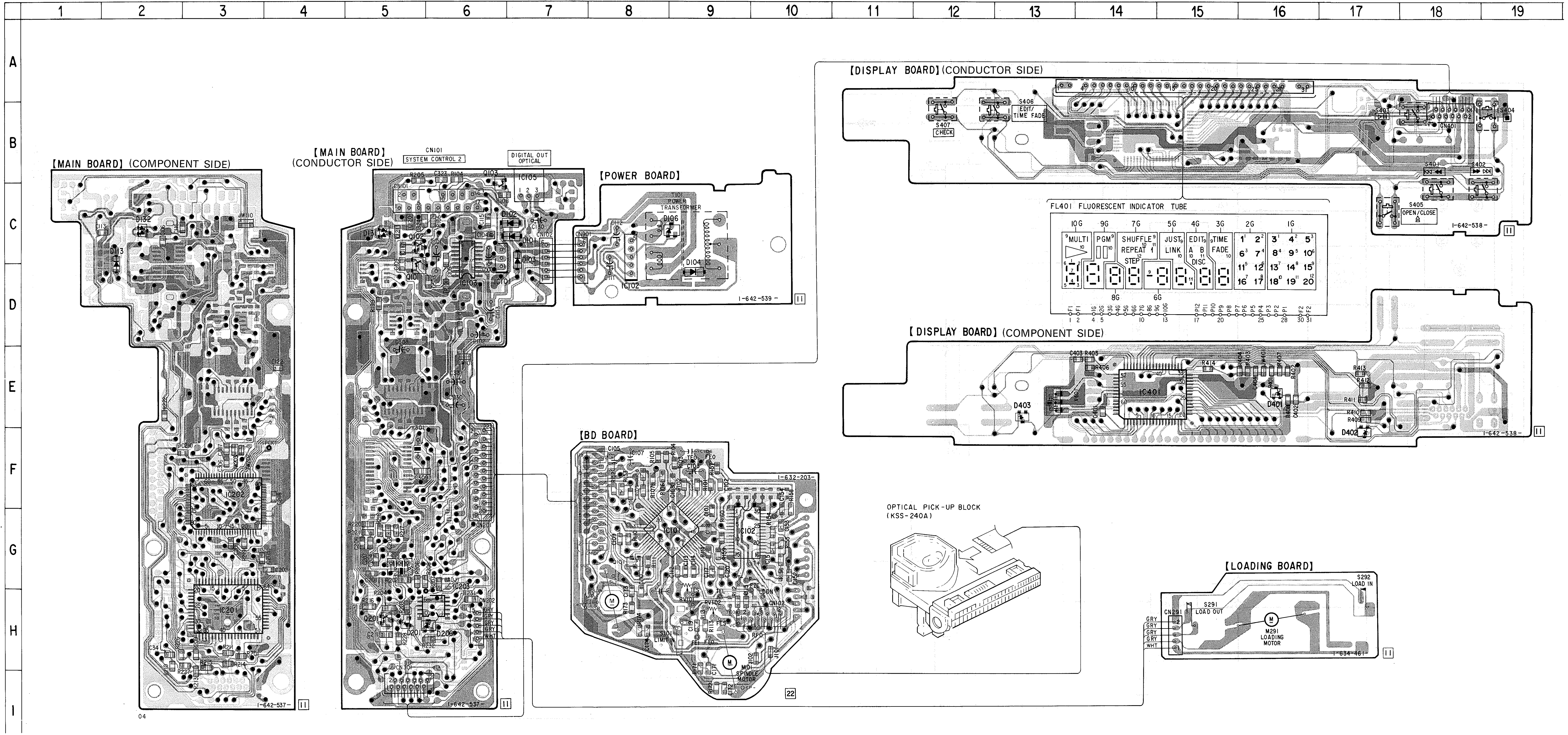
BD Board

Ref. No.	Location
IC101	G-8
IC102	G-9
Q101	G-8

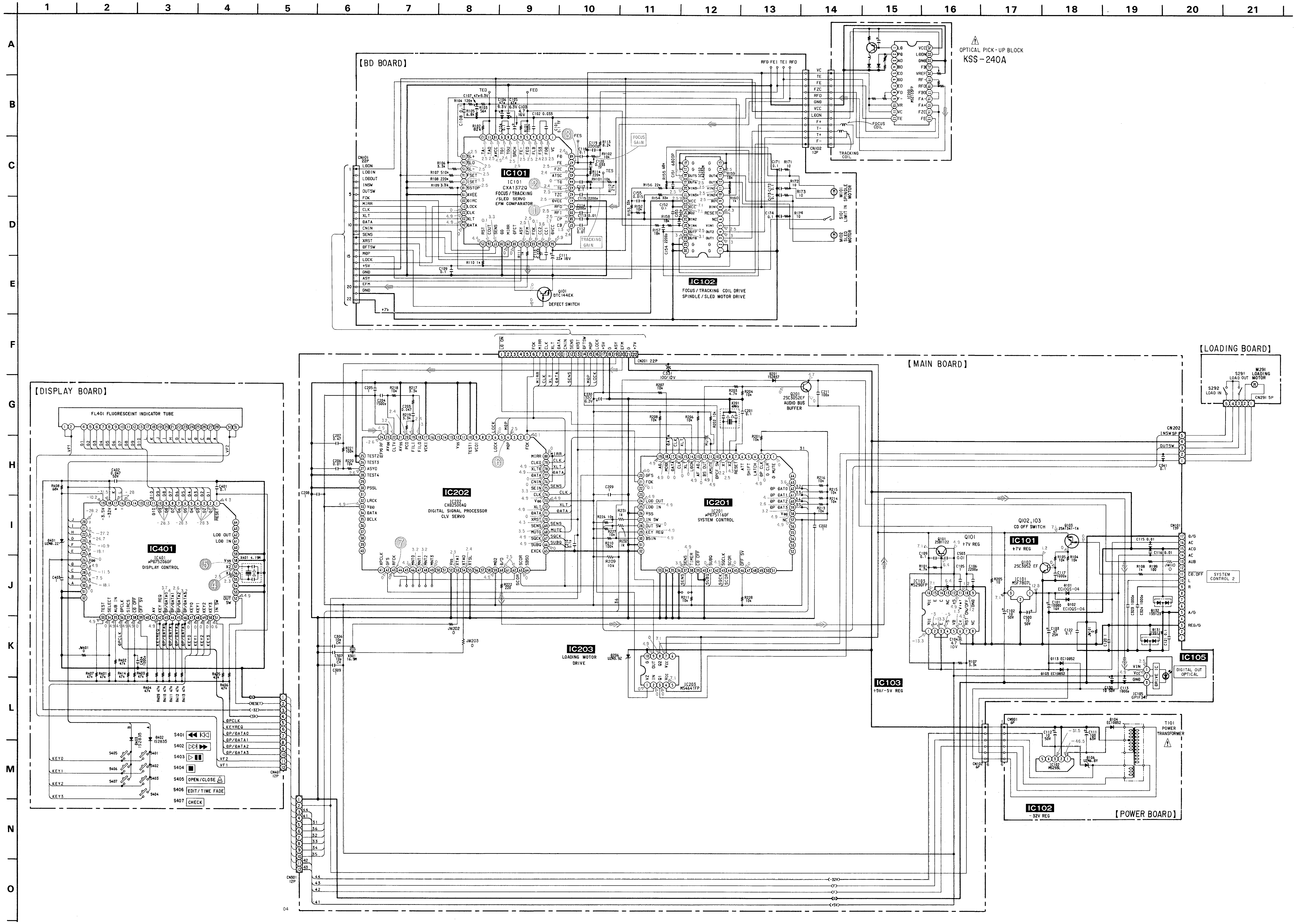
Note:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.

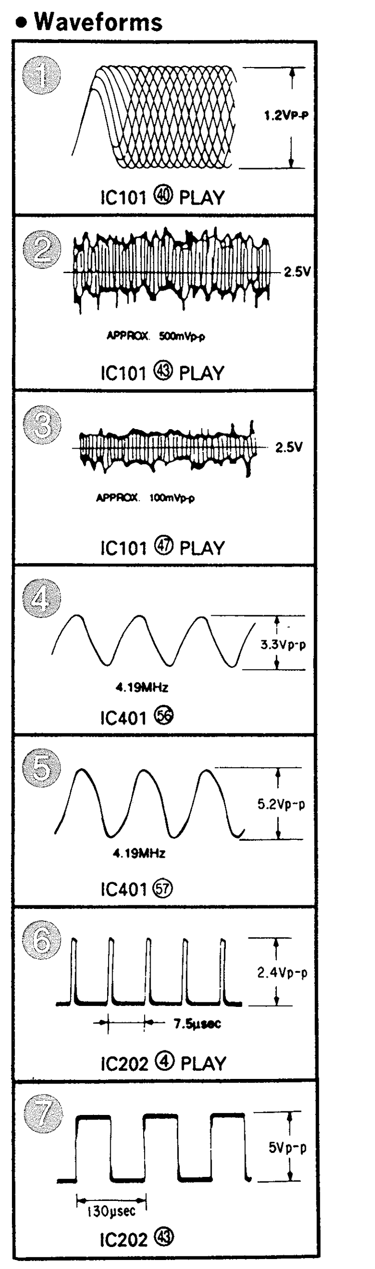
4-3. PRINTED WIRING BOARDS • Refer to page 22 for Semiconductor Lead Layouts.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
A
B
C
D
E
F
G
H
I
[MAIN BOARD] (COMPONENT SIDE)
IC202
IC201
1-642-537-
11
04
[MAIN BOARD] (CONDUCTOR SIDE)
CN101
SYSTEM CONTROL 2
DIGITAL OUT
OPTICAL
IC105
Q103
IC103
Q101
IC203
D206
D201
Q201
1-642-537-
11
[POWER BOARD]
T101
POWER TRANSFORMER
D106
D104
IC102
1-642-539-
11
[BD BOARD]
IC101
IC102
M
M101
SPINDLE MOTOR
S101
LIMIT IN
1-632-203-
22
[DISPLAY BOARD] (CONDUCTOR SIDE)
S406
EDIT/TIME FADE
S407
CHECK
S403
S404
S401
S402
S405
OPEN/CLOSE
1-642-538-
11
FL401 FLUORESCENT INDICATOR TUBE
10G
9G
7G
5G
4G
3G
2G
1G
MULTI
PGM
SHUFFLE
REPEAT
STEP
JUST
LINK
EDIT
A B
DISC
TIME
FADE
1 2 3 4 5
6 7 8 9 10
11 12 13 14 15
16 17 18 19 20
8G
6G
[DISPLAY BOARD] (COMPONENT SIDE)
IC401
D401
D402
D403
1-642-538-
11
OPTICAL PICK-UP BLOCK
(KSS-240A)
[LOADING BOARD]
CN291
S291
LOAD OUT
S292
LOAD IN
M291
LOADING MOTOR
GRY
GRY
GRY
GRY
WHT
1-634-461-
11

4-4. SCHEMATIC DIAGRAM • Refer to page 19 for IC Block Diagrams.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
OPTICAL PICK-UP BLOCK
KSS-240A
【BD BOARD】
RFO FEI TEI RFO
FEO
TEO
FES
FOCUS GAIN
TRACKING GAIN
IC101
IC101
CXA1572Q
FOCUS/TRACKING
/SLED SERVO
EFM COMPARATOR
IC102
FOCUS/TRACKING COIL DRIVE
SPINDLE/SLED MOTOR DRIVE
CN101
22P
CN102
12P
FOCUS COIL
TRACKING COIL
M101
SPINDLE MOTOR
M102
SLED MOTOR
S101
LIMIT IN
Q101
DTC144EK
DEFECT SWITCH
LD ON
FOK
MIRR
CLK
XLT
DATA
CNIN
SENS
XRST
BFTSW
MDP
LOCK
+5V
GND
ASY
EFM
GND
+7V
CN201 22P
【MAIN BOARD】
【LOADING BOARD】
S291
LOAD OUT
M291
LOADING MOTOR
S292
LOAD IN
CN291 5P
CN202
INSW
OUTSW
IC202
IC202
CXD2500AQ
DIGITAL SIGNAL PROCESSOR
CLV SERVO
IC201
IC201
µPD75116OF
SYSTEM CONTROL
Q201
2SC3052EF
AUDIO BUS BUFFER
IC203
LOADING MOTOR DRIVE
IC203
M5461FP
【DISPLAY BOARD】
FL401 FLUORESCEINT INDICATOR TUBE
IC401
IC401
µPD75206GF
DISPLAY CONTROL
LOG OUT
LOG IN
S401
S402
S403
S404
S405 OPEN/CLOSE
S406 EDIT/TIME FADE
S407 CHECK
KEY0
KEY1
KEY2
KEY3
CN402
12P
CN501
12P
Q102,103
CD OFF SWITCH
Q101
+7V REG
IC101
+7V REG
Q102
2SC3052 EF
IC101
M5F7807L
IC103
M5290FP
IC103
+5V/-5V REG
IC105
DIGITAL OUT OPTICAL
IC105
GP1F341T
CN101
17P
SYSTEM CONTROL 2
【POWER BOARD】
CN901
6P
T101
POWER TRANSFORMER
IC102
-32V REG
IC102
M5293L

• Waveforms


①
1.2Vp-p
IC101 ㊵ PLAY
②
2.5V
APPROX. 500mVp-p
IC101 ㊸ PLAY
③
2.5V
APPROX. 100mVp-p
IC101 ㊼ PLAY
④
3.3Vp-p
4.19MHz
IC401 56
⑤
5.2Vp-p
4.19MHz
IC401 57
⑥
2.4Vp-p
7.5µsec
IC202 ④ PLAY
⑦
5Vp-p
130µsec
IC202 ㊸

Note:

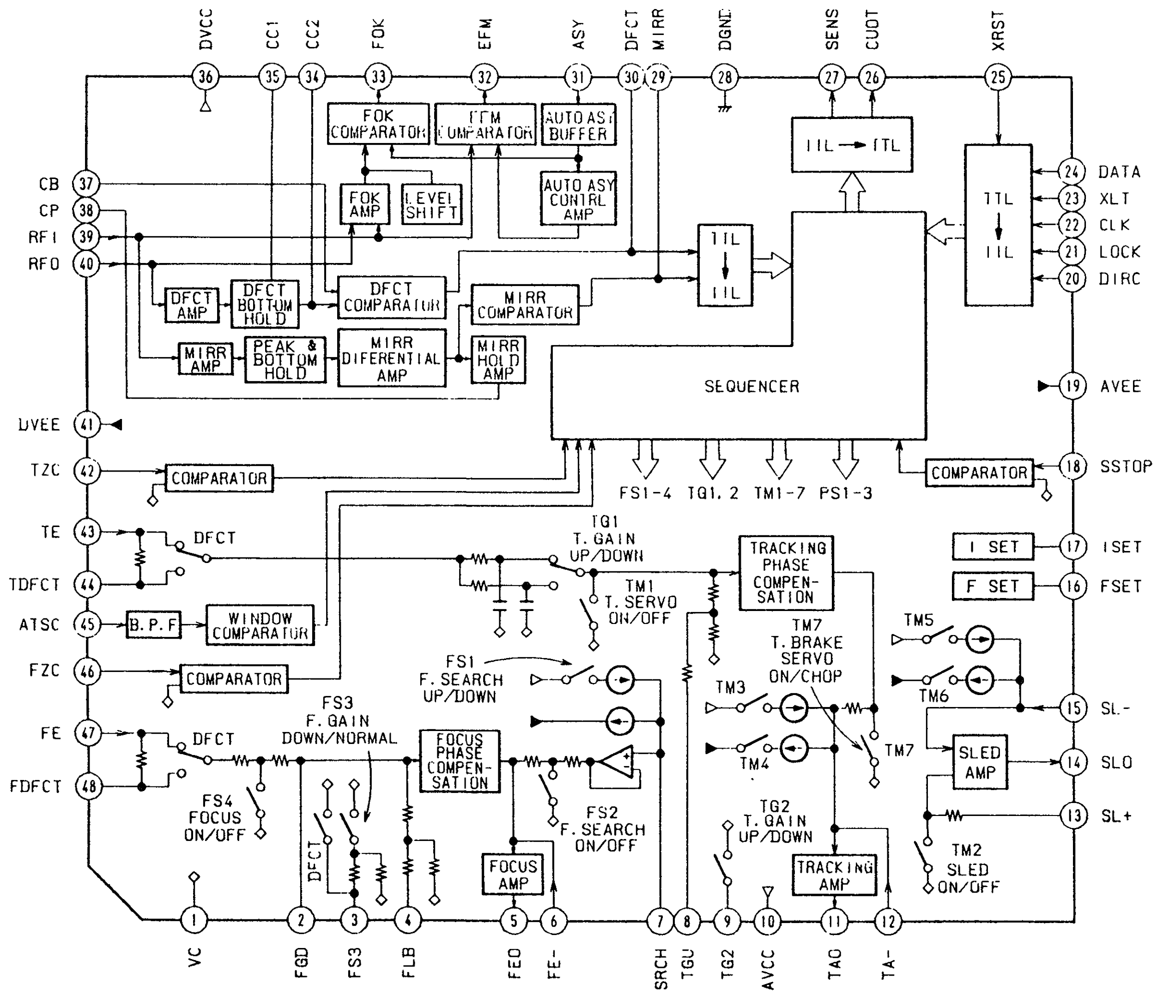
- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ▭ : nonflammable resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▬ : B+ Line
- ▬ : B– Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : STOP
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

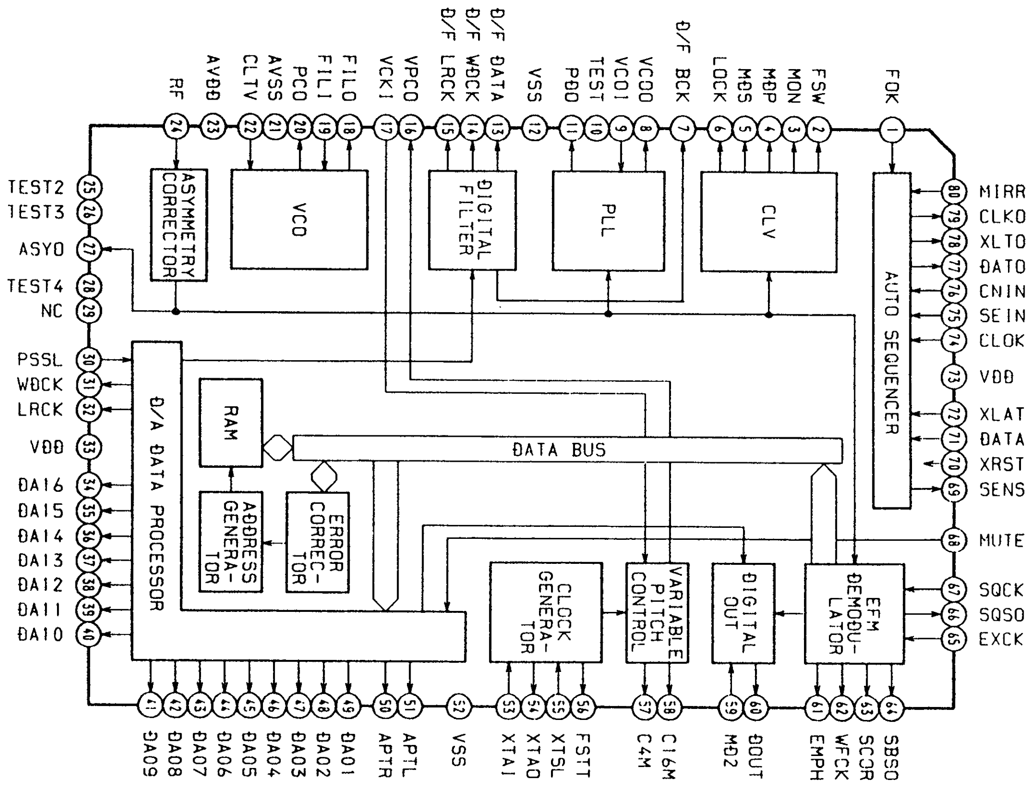
• IC Block Diagrams

IC101 CXA1372Q (BD Board)



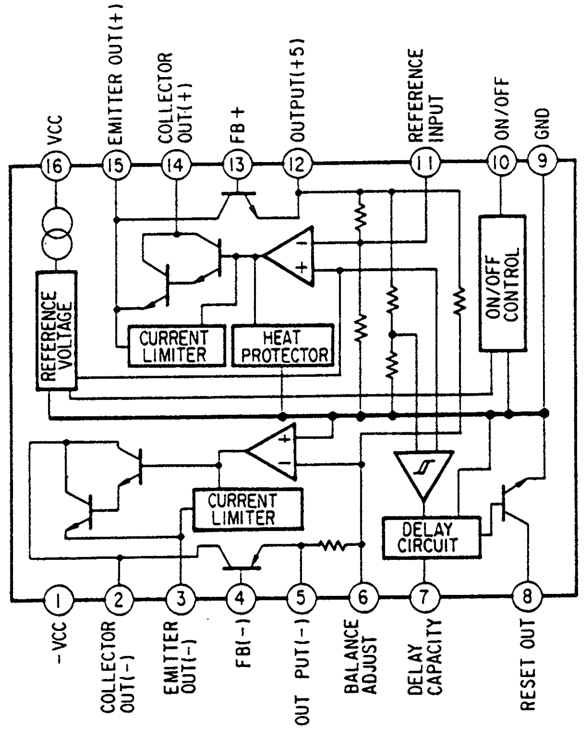
DVCC
CC1
CC2
FOK
EFM
ASY
DFCT
MIRR
DGND
SENS
CUOT
XRST
FOK COMPARATOR
EFM COMPARATOR
AUTO ASY BUFFER
FOK AMP
LEVEL SHIFT
AUTO ASY CONTRL AMP
TTL → ITL
DATA
XLT
CLK
LOCK
DIRC
CB
CP
RFI
RFO
DFCT AMP
DFCT BOTTOM HOLD
DFCT COMPARATOR
MIRR COMPARATOR
TTL ↓ IIL
MIRR AMP
PEAK & BOTTOM HOLD
MIRR DIFERENTIAL AMP
MIRR HOLD AMP
SEQUENCER
AVEE
DVEE
TZC
COMPARATOR
COMPARATOR
SSTOP
FS1-4 TG1, 2 TM1-7 PS1-3
TE
DFCT
TG1 T. GAIN UP/DOWN
TRACKING PHASE COMPEN-SATION
I SET
ISET
TDFCT
TM1 T. SERVO ON/OFF
F SET
FSET
ATSC
B. P. F
WINDOW COMPARATOR
TM7 T. BRAKE SERVO ON/CHOP
TM5
FZC
COMPARATOR
FS1 F. SEARCH UP/DOWN
TM3
TM6
SL-
FS3 F. GAIN DOWN/NORMAL
FE
DFCT
FOCUS PHASE COMPEN-SATION
TM4
TM7
SLED AMP
SLO
FDFCT
FS4 FOCUS ON/OFF
DFCT
FS2 F. SEARCH ON/OFF
TG2 T. GAIN UP/DOWN
SL+
TM2 SLED ON/OFF
FOCUS AMP
TRACKING AMP
VC
FGD
FS3
FLB
FEO
FE-
SRCH
TGU
TG2
AVCC
TAO
TA-

IC202 CXD2500AQ



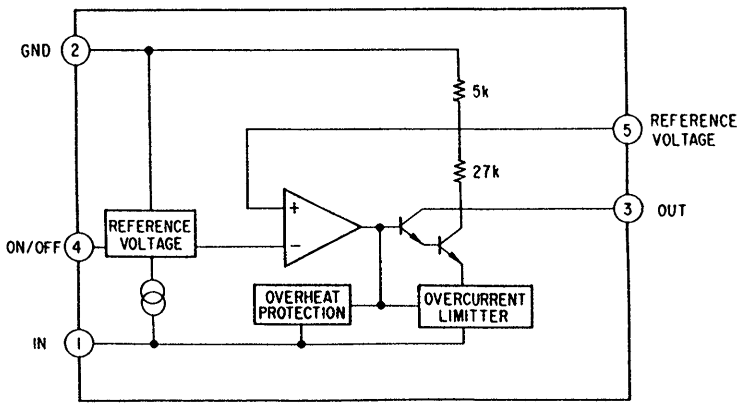
RF
AVDD
CLTV
AVSS
PCO
FILI
FILO
VCKI
VPCO
D/F LRCK
D/F WDCK
D/F DATA
VSS
PDO
TEST
VCOI
VCOO
D/F BCK
LOCK
MDS
MDP
MON
FSW
FOK
TEST2
TEST3
ASYO
TEST4
NC
ASYMMETRY CORECTOR
VCO
DIGITAL FILTER
PLL
CLV
AUTO SEQUENCER
MIRR
CLKO
XLTO
DATO
CNIN
SEIN
CLOK
VDD
XLAT
DATA
XRST
SENS
MUTE
SQCK
SQSO
EXCK
PSSL
WDCK
LRCK
VDD
DA16
DA15
DA14
DA13
DA12
DA11
DA10
D/A DATA PROCESSOR
RAM
DATA BUS
ADDRESS GENERATOR
ERROR CORRECTOR
CLOCK GENERATOR
VARIABLE PITCH CONTROL
DIGITAL OUT
EFM DEMODULATOR
DA09
DA08
DA07
DA06
DA05
DA04
DA03
DA02
DA01
APTR
APTL
VSS
XTAI
XTAO
XTSL
FSTT
C4M
C16M
MD2
DOUT
EMPH
WFCK
SCOR
SBSO

IC103 M5290FP



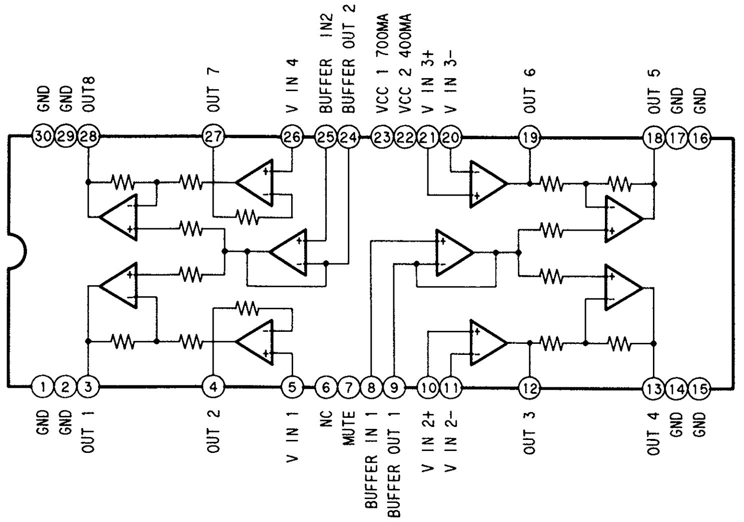
VCC
EMITTER OUT(+)
COLLECTOR OUT(+)
FB+
OUTPUT(+5)
REFERENCE INPUT
ON/OFF
GND
REFERENCE VOLTAGE
CURRENT LIMITER
HEAT PROTECTOR
ON/OFF CONTROL
CURRENT LIMITER
DELAY CIRCUIT
-VCC
COLLECTOR OUT(-)
EMITTER OUT(-)
FBI(-)
OUT PUT(-1)
BALANCE ADJUST
DELAY CAPACITY
RESET OUT

IC102 M5293L (Power Board)



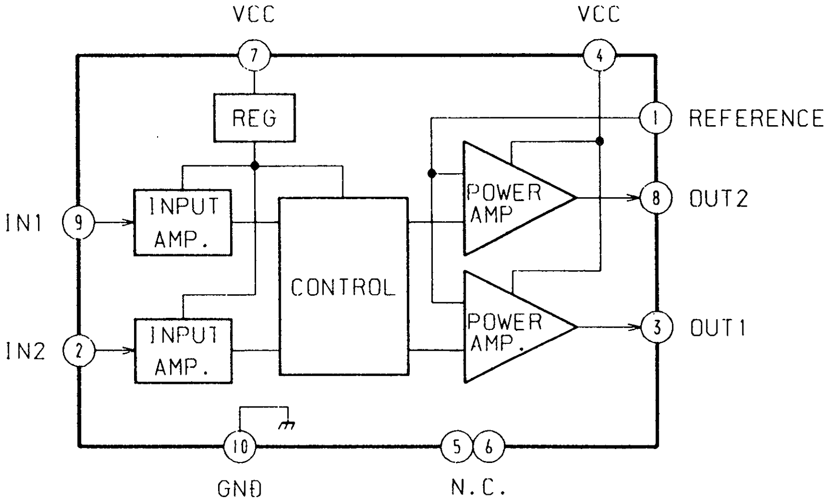
GND
5k
REFERENCE VOLTAGE
27k
OUT
ON/OFF
REFERENCE VOLTAGE
OVERHEAT PROTECTION
OVERCURRENT LIMITTER
IN

IC102 LA6532M (BD Board)



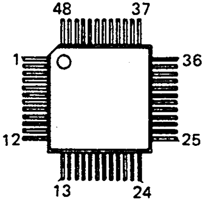
GND
GND
OUT8
OUT 7
V IN 4
BUFFER IN2
BUFFER OUT 2
VCC 1 700MA
VCC 2 400MA
V IN 3+
V IN 3-
OUT 6
OUT 5
GND
GND
GND
GND
OUT 1
OUT 2
V IN 1
NC
MUTE
BUFFER IN 1
BUFFER OUT 1
V IN 2+
V IN 2-
OUT 3
OUT 4
GND
GND

IC203 M54641FP


VCC
7
VCC
4
REG
1
REFERENCE
INPUT AMP.
POWER AMP
8
OUT2
IN1
9
CONTROL
INPUT AMP.
POWER AMP.
3
OUT1
IN2
2
10
GND
5
6
N.C.

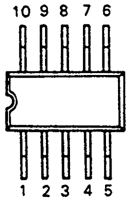
4-5. SEMICONDUCTOR LEAD LAYOUTS

CXA1372AQ

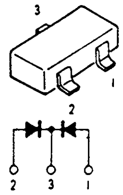

48
37
1
36
12
25
13
24

(TOP VIEW)

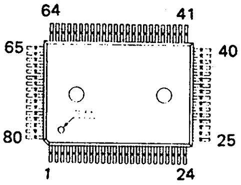
M54641FP


10 9 8 7 6
1 2 3 4 5

MA152WK

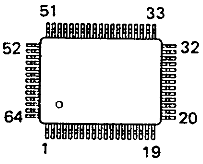


CXD2500AQ


64
41
65
40
80
25
1
24

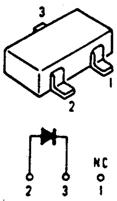
MARKING SIDE VIEW

μPD75206GF -716-3BE

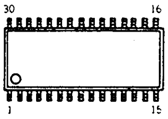

51
33
52
32
64
20
1
19

(TOP VIEW)

UZM3.9Z
UZM6.8Y

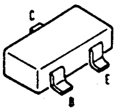


LA6532M

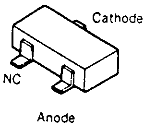


(TOP VIEW)

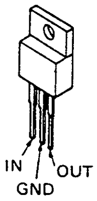
DTC144EK
2SC3052-EF



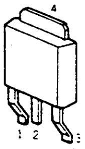
UZM8.2Z


Cathode
NC
Anode

M5F7807L

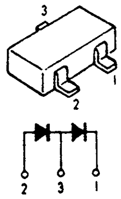


2SA1341

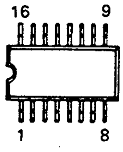


1 BASE
2 COLLECTOR
3 EMITTER
4 COLLECTOR

1SS226

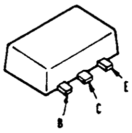


M5290FP

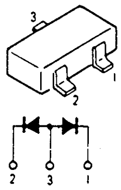


(TOP VIEW)

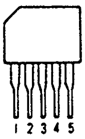
2SB1122-S



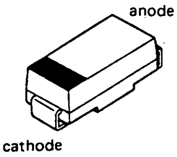
1S2836



M5293L



EC10DS2
EC10QS-04


anode
cathode

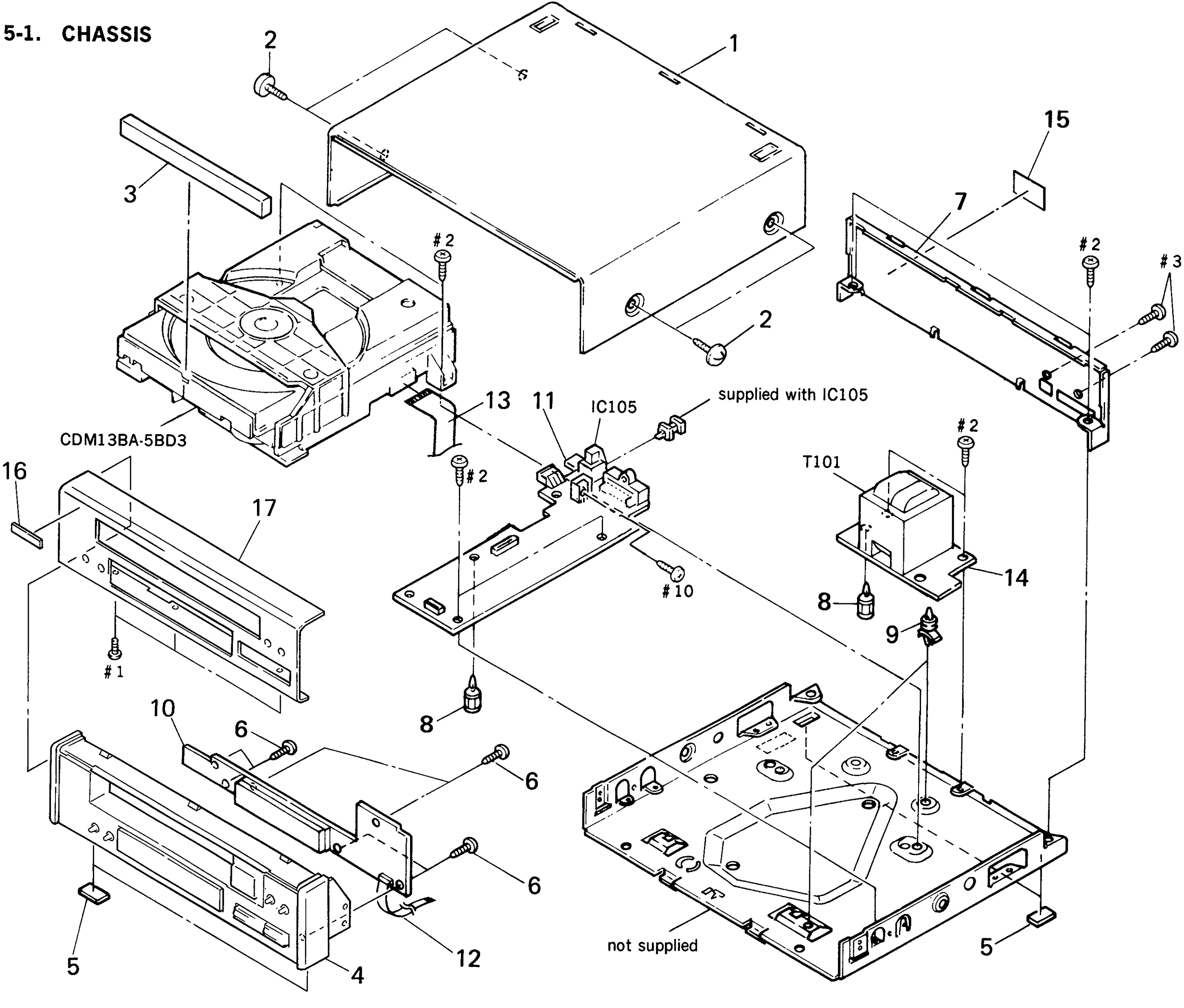
SECTION 5
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)... (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

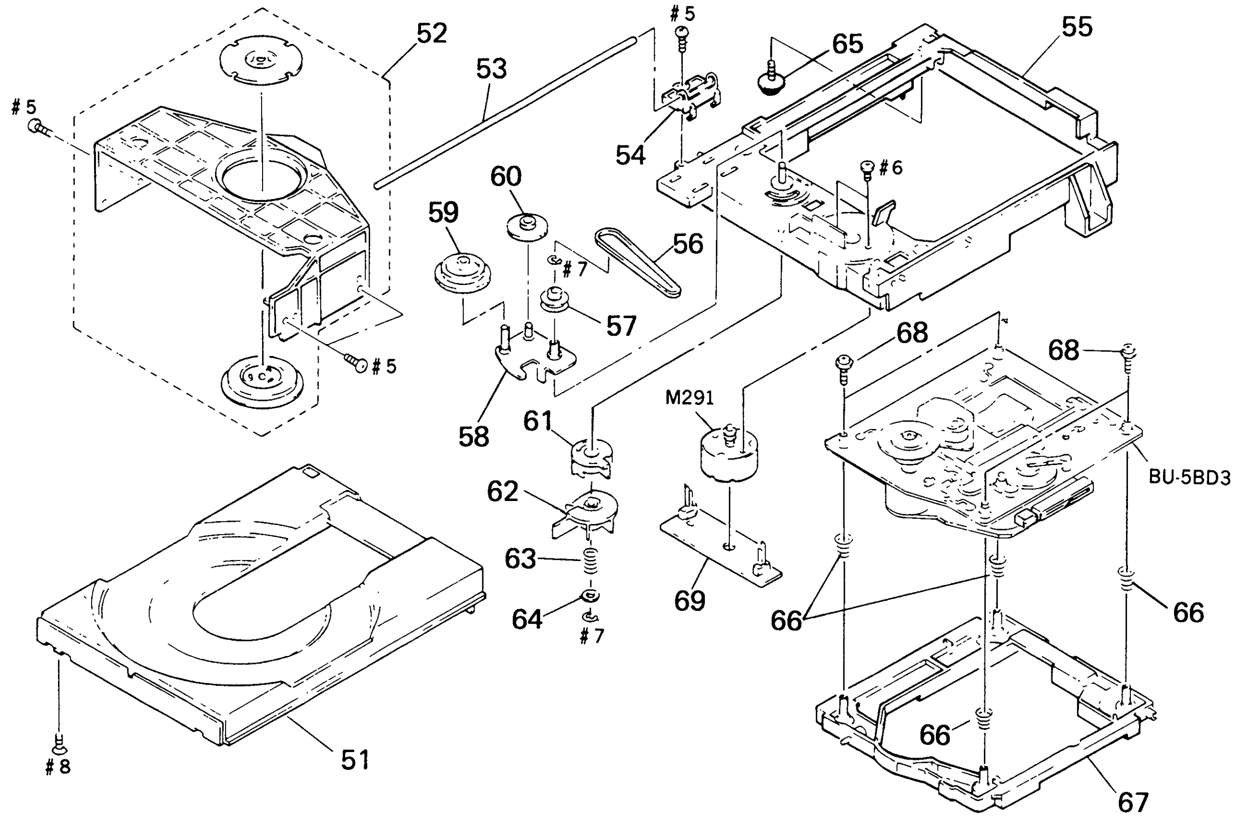
5-1. CHASSIS



Ref. No.	Part No.	Description	Remark
1	4-932-844-01	CASE	
2	3-363-099-01	SCREW (CASE +3X8 TP2)	
3	X-4941-527-1	LID (TRAY) ASSY	
4	X-4941-525-1	PANEL ASSY, FRONT	
5	4-930-336-21	FOOT (FELT)	
6	4-951-620-01	SCREW (2.6X8), +BVTP	
* 7	4-948-753-51	PANEL (CDP), BACK (AEP, UK, Italian)	
* 7	4-948-753-61	PANEL (CDP), BACK (Germany)	
* 8	3-669-610-00	SPACER	
* 9	4-924-098-11	HOLDER, PC BOARD	

Ref. No.	Part No.	Description	Remark
* 10	A-4649-269-A	DISPLAY BOARD, COMPLETE	
* 11	A-4649-267-A	MOUNTED PCB (A), MAIN	
12	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
13	1-690-753-11	WIRE (FLAT TYPE) (22 CORE)	
* 14	1-642-539-11	POWER BOARD	
* 15	4-941-548-01	LABEL, CLASS1	
16	4-942-636-01	EMBLEM (NO. 3. 5), SONY	
17	4-944-445-01	PANEL, FRONT	
IC105	8-749-921-12	IC GPIF32T	
⚠T101	1-450-704-11	TRANSFORMER, POWER	

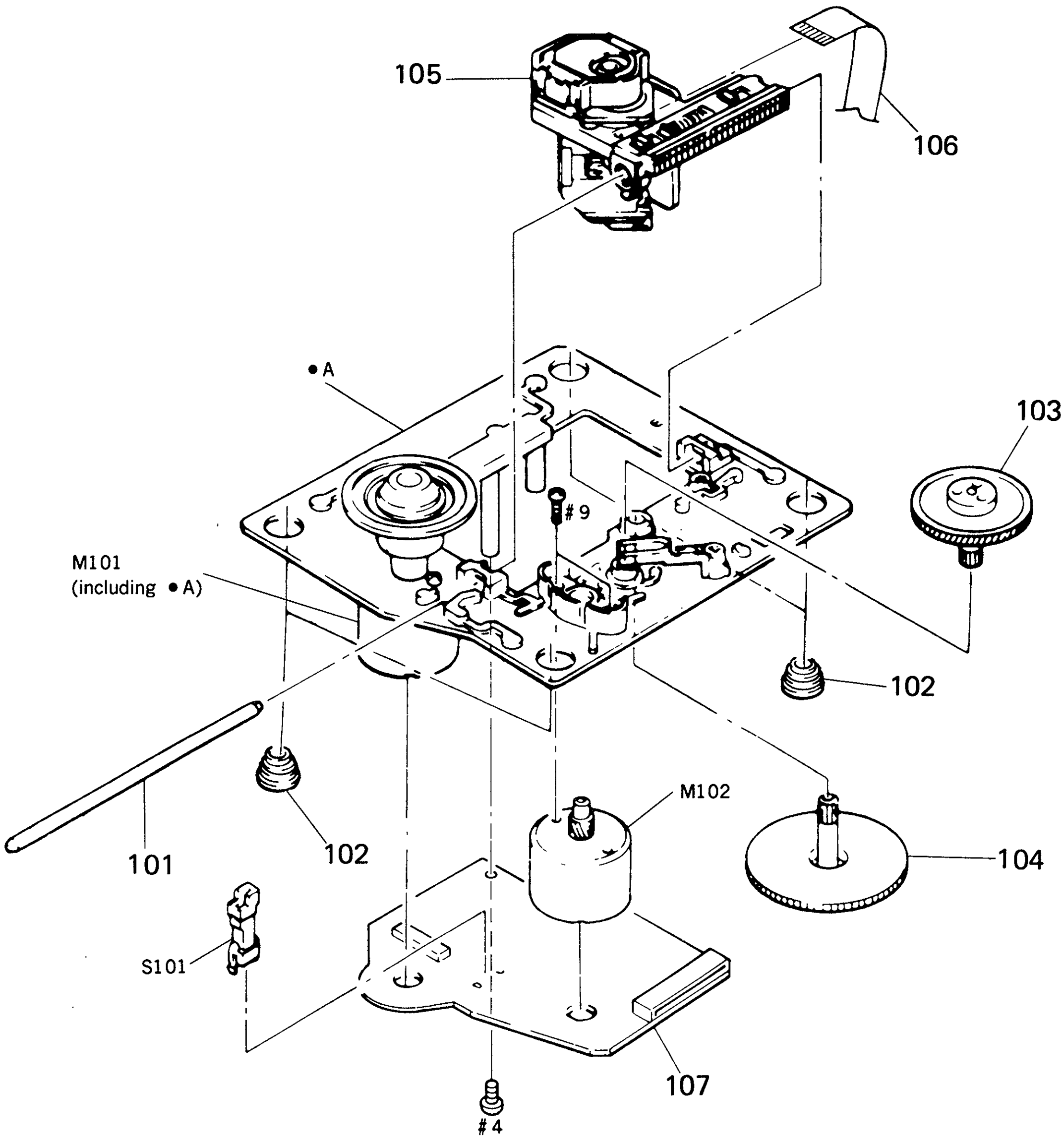
5-2. CD BLOCK (CDM13BA-5BD3)


#5
52
53
#5
65
55
54
#6
60
59
56
#7
57
#5
68
68
M291
58
61
BU-5BD3
62
63
69
66
66
64
#7
66
51
#8
67

Ref. No.	Part No.	Description	Remark
51	4-944-012-01	TABLE, DISC	
52	A-4604-752-A	HOLDER (MG) ASSY	
53	4-929-764-01	SHAFT (TABLE GUIDE)	
54	4-944-006-01	BEARING	
55	X-4941-462-1	CHASSIS (MD) ASSY	
56	4-927-649-01	BELT	
57	4-929-724-01	PULLEY (B)	
58	X-4929-703-1	ARM ASSY, SWING	
59	4-927-620-01	GEAR (P)	
60	4-927-628-01	GEAR (C)	

Ref. No.	Part No.	Description	Remark
61	4-929-727-01	CAM (A)	
62	4-929-729-01	CAM (B)	
63	3-659-338-00	SPRING, COMPRESSION	
64	4-927-654-01	WASHER (LIMITER)	
* 65	4-917-583-21	BRACKET, YOKE	
66	4-917-541-01	SPRING (B)	
67	4-929-747-01	HOLDER (BU)	
68	4-933-134-01	SCREW (+PTPWH M2.6X6)	
* 69	1-634-461-11	LOADING BOARD	
M291	A-4608-362-A	MOTOR (L) ASSY	

5-3. OPTICAL PICK-UP BLOCK (BU-5BD3)


105
106
● A
103
# 9
M101
(including ● A)
102
101
102
M102
104
S101
107
# 4

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
101	4-917-565-01	SHAFT, SLED	
102	4-933-126-01	INSULATOR (A)	
103	4-917-567-01	GEAR (M)	
104	4-917-564-01	GEAR (P), FLATNESS	
⚠105	8-848-144-11	DEVICE, OPTICAL KSS-240A	
106	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
* 107	A-4617-371-A	BD BOARD, COMPLETE	
M101	X-4917-523-3	MOTOR ASSY, SPINDLE	
M102	X-4917-504-1	MOTOR ASSY, SLED	
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	

BD

SECTION 6
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA ..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
*	A-4617-371-A	BD BOARD, COMPLETE ******************	
		< CAPACITOR >	
C101	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C102	1-163-989-11	CERAMIC CHIP 0.033uF 10%	25V
C103	1-126-163-11	ELECT 4.7uF 20%	50V
C104	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C105	1-126-154-11	ELECT 47uF 20%	6.3V
C106	1-126-154-11	ELECT 47uF 20%	6.3V
C107	1-126-154-11	ELECT 47uF 20%	6.3V
C108	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C109	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C110	1-163-989-11	CERAMIC CHIP 0.033uF 10%	25V
C111	1-131-367-00	TANTALUM 22uF 10%	20V
C112	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C113	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C114	1-164-161-11	CERAMIC CHIP 0.0022uF 10%	100V
C115	1-164-161-11	CERAMIC CHIP 0.0022uF 10%	100V
C117	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C118	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C119	1-164-161-11	CERAMIC CHIP 0.0022uF 10%	100V
C120	1-163-989-11	CERAMIC CHIP 0.033uF 10%	25V
C151	1-163-019-00	CERAMIC CHIP 0.0068uF 10%	50V
C152	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C153	1-163-006-11	CERAMIC CHIP 560PF 10%	50V
C154	1-164-161-11	CERAMIC CHIP 0.0022uF 10%	100V
C155	1-163-023-00	CERAMIC CHIP 0.015uF 5%	50V
C171	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C172	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C173	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C174	1-163-038-00	CERAMIC CHIP 0.1uF	25V
		< CONNECTOR >	
CN101	1-568-796-11	SOCKET, CONNECTOR 22P	
CN102	1-568-795-11	SOCKET, CONNECTOR 12P	
		< IC >	
IC101	8-752-053-73	IC CXA1372AQ	
IC102	8-759-822-36	IC LA6532M	
		< JUMPER RESISTOR >	
J101	1-216-295-00	METAL CHIP 0 5%	1/10W
J102	1-216-295-00	METAL CHIP 0 5%	1/10W
		< TRANSISTOR >	
Q101	8-729-901-01	TRANSISTOR DTC144EK	
		< RESISTOR >	
R101	1-216-097-00	METAL CHIP 100K 5%	1/10W
R102	1-216-095-00	METAL CHIP 82K 5%	1/10W
R103	1-216-091-00	METAL CHIP 56K 5%	1/10W
R104	1-216-099-00	METAL CHIP 120K 5%	1/10W
R105	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R106	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R107	1-216-114-00	METAL GLAZE 510K 5%	1/10W
R108	1-216-105-00	METAL CHIP 220K 5%	1/10W
R109	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R110	1-216-049-00	METAL CHIP 1K 5%	1/10W
R111	1-216-049-00	METAL CHIP 1K 5%	1/10W
R112	1-216-083-00	METAL CHIP 27K 5%	1/10W
R113	1-216-071-00	METAL CHIP 8.2K 5%	1/10W
R114	1-216-105-00	METAL CHIP 220K 5%	1/10W
R152	1-216-073-00	METAL CHIP 10K 5%	1/10W
R153	1-216-085-00	METAL CHIP 33K 5%	1/10W
R154	1-216-085-00	METAL CHIP 33K 5%	1/10W
R155	1-216-093-00	METAL CHIP 68K 5%	1/10W
R156	1-216-081-00	METAL CHIP 22K 5%	1/10W
R157	1-216-079-00	METAL CHIP 18K 5%	1/10W
R158	1-216-079-00	METAL CHIP 18K 5%	1/10W
R159	1-216-079-00	METAL CHIP 18K 5%	1/10W
R160	1-216-049-00	METAL CHIP 1K 5%	1/10W
R171	1-216-001-00	METAL CHIP 10 5%	1/10W
R172	1-216-001-00	METAL CHIP 10 5%	1/10W
R173	1-216-001-00	METAL CHIP 10 5%	1/10W
R174	1-216-001-00	METAL CHIP 10 5%	1/10W

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV101	1-241-630-11	RES, ADJ, CARBON 10K	
RV102	1-241-630-11	RES, ADJ, CARBON 10K	

< SWITCH >

Ref. No.	Part No.	Description	Remark
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	

****

Ref. No.	Part No.	Description	Remark
*	A-4649-269-A	DISPLAY BOARD, COMPLETE	
		***********************	
*	A-4649-267-A	MAIN BOARD, COMPLETE	
		********************	
*	1-642-539-11	POWER BOARD	
		***********	
*	4-880-403-11	HEAT SINK	
*	4-932-810-11	CUSHION (FL)	
*	4-944-444-01	HOLDER (FL TUBE)	
	7-682-548-04	SCREW +BVTT 3X8 (S)	

< CAPACITOR >

Ref. No.	Part No.	Description	Remark
C101	1-126-939-11	ELECT 10000uF 20% 16V	
C102	1-124-907-11	ELECT 10uF 20% 50V	
C103	1-124-477-11	ELECT 47uF 20% 25V	
C104	1-135-155-21	TANTALUM CHIP 4.7uF 10% 16V	
C105	1-164-346-11	CERAMIC CHIP 1uF 16V	
C106	1-164-695-11	CERAMIC CHIP 0.0022uF 5% 50V	
C109	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C111	1-126-063-11	ELECT 100uF 20% 63V	
C112	1-124-907-11	ELECT 10uF 20% 50V	
C113	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
C115	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C116	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C117	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
C120	1-164-346-11	CERAMIC CHIP 1uF 16V	
C121	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C122	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C130	1-124-907-11	ELECT 10uF 20% 50V	
C201	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C202	1-164-346-11	CERAMIC CHIP 1uF 16V	
C203	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C204	1-163-145-00	CERAMIC CHIP 0.0015uF 5% 50V	
C205	1-164-346-11	CERAMIC CHIP 1uF 16V	
C206	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C207	1-164-005-11	CERAMIC CHIP 0.47uF 25V	
C208	1-164-346-11	CERAMIC CHIP 1uF 16V	
C209	1-164-346-11	CERAMIC CHIP 1uF 16V	
C210	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C211	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C306	1-163-227-11	CERAMIC CHIP 10PF 5% 50V	
C307	1-163-227-11	CERAMIC CHIP 10PF 5% 50V	
C309	1-162-638-11	CERAMIC CHIP 1uF 16V	
C323	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
C324	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
C330	1-124-442-00	ELECT 330uF 20% 6.3V	
C331	1-124-443-00	ELECT 100uF 20% 10V	
C341	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C401	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C402	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C403	1-164-346-11	CERAMIC CHIP 1uF 16V	
C404	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C500	1-124-907-11	ELECT 10uF 20% 50V	
C503	1-163-031-11	CERAMIC CHIP 0.01uF 50V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CN101	1-569-624-11	SOCKET, CONNECTOR 17P (SYSTEM CONTROL 2)	
CN102	1-568-662-11	CONNECTOR, BOARD TO BOARD 6P	
* CN201	1-568-822-11	SOCKET, CONNECTOR 22P	
* CN202	1-564-339-00	PIN, CONNECTOR 5P	
* CN301	1-573-099-11	HOUSING, CONNECTOR 12P	
* CN401	1-573-098-11	HOUSING, CONNECTOR 12P	
CN901	1-568-668-11	CONNECTOR, BOARD TO BOARD 6P	

< DIODE >

Ref. No.	Part No.	Description	Remark
D101	8-719-210-39	DIODE EC10QS-04	
D102	8-719-210-39	DIODE EC10QS-04	
D103	8-719-210-33	DIODE EC10DS2	
D104	8-719-210-33	DIODE EC10DS2	
D106	8-719-021-59	DIODE UZM6.8Y	
D113	8-719-210-33	DIODE EC10DS2	
D131	8-719-800-76	DIODE 1SS226	
D132	8-719-800-76	DIODE 1SS226	
D201	8-719-400-18	DIODE MA152WK	
D206	8-719-021-13	DIODE UZM3.9Z	
D401	8-719-021-77	DIODE UZM8.2Z	
D402	8-719-104-34	DIODE 1S2836	
D403	8-719-104-34	DIODE 1S2836	

< FLUORESCENT INDICATOR >

Ref. No.	Part No.	Description	Remark
FL401	1-519-652-11	INDICATOR TUBE, FLUORESCENT	

< IC >

Ref. No.	Part No.	Description	Remark
IC101	8-759-604-86	IC M5F7807	
IC102	8-759-633-42	IC M5293L	
IC103	8-759-636-24	IC M5290FP	
IC105	8-749-921-12	IC GP1F32T	
IC201	8-759-059-86	IC uPD75116GF-F21-3BE	
IC202	8-752-337-26	IC CXD2500AQ	

DISPLAY MAIN POWER LOADING

Ref. No.	Part No.	Description	Remark
IC203	8-759-636-20	IC M54641FP	
IC401	8-759-154-14	IC uPD75206GF-716-3BE	
		< JUMPER RESISTOR >	
JW101	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW110	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW202	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW203	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW401	1-216-295-00	METAL CHIP 0 5% 1/10W	
		< TRANSISTOR >	
Q101	8-729-804-41	TRANSISTOR 2SB1122-S	
Q102	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q103	8-729-805-69	TRANSISTOR 2SA1341	
Q201	8-729-620-06	TRANSISTOR 2SC3052-EF	
		< RESISTOR >	
R101	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R104	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R105	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R107	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R108	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R199	1-216-025-00	METAL CHIP 100 5% 1/10W	
R201	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R202	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R203	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R204	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R205	1-216-001-00	METAL CHIP 10 5% 1/10W	
R206	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R207	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R208	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R209	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R210	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R211	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R213	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R214	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R215	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R216	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R217	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R218	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R219	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R220	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R221	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R222	1-216-033-00	METAL CHIP 220 5% 1/10W	
R226	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R227	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R228	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R231	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R232	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R401	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R402	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R403	1-216-089-00	METAL CHIP 47K 5% 1/10W	
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R406	1-216-089-00	METAL CHIP 47K 5% 1/10W	
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R408	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R409	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R410	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R411	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R412	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R413	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R414	1-216-089-00	METAL CHIP 47K 5% 1/10W	
		< SWITCH >	
S401	1-554-303-21	SWITCH, TACTILE (◀◀ ⏮)	
S402	1-554-303-21	SWITCH, TACTILE (⏭ ▶▶)	
S403	1-554-303-21	SWITCH, TACTILE (▷ ❚❚)	
S404	1-554-303-21	SWITCH, TACTILE (■)	
S405	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE ⏏)	
S406	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)	
S407	1-554-303-21	SWITCH, TACTILE (CHECK)	
		< TRANSFORMER >	
⚠T101	1-450-704-11	TRANSFORMER, POWER	
		< VIBRATOR >	
X201	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
X301	1-567-908-11	VIBRATOR, CRYSTAL (16.9MHz)	
X401	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	

****

Ref. No.	Part No.	Description	Remark
*	1-634-461-11	LOADING BOARD *************	
		< CONNECTOR >	
* CN291	1-564-498-11	PIN, CONNECTOR 5P	
		< SWITCH >	
S291	1-571-924-11	SWITCH, LEAF (LOAD OUT)	
S292	1-571-924-11	SWITCH, LEAF (LOAD IN)	

****

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS *************	
12	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
13	1-690-753-11	WIRE (FLAT TYPE) (22 CORE)	
⚠105	8-848-144-11	DEVICE, OPTICAL KSS-240A	
106	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
M101	X-4917-523-3	MOTOR ASSY, SPINDLE	
M102	X-4917-504-1	MOTOR ASSY, SLED	
M291	A-4608-362-A	MOTOR (L) ASSY	

****

****

HARDWARE LIST

****

#1	7-682-547-09	SCREW +BVTT 3X6 (S)
#2	7-682-547-04	SCREW +BVTT 3X6 (S)
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#4	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S
#5	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#6	7-621-775-10	SCREW +B 2.6X4
#7	7-624-105-04	STOP RING 2.3, TYPE -E
#8	7-685-234-19	SCREW +KTP 2.6X8 TYPE2NON-SLIT
#9	7-621-255-15	SCREW +P 2X3
#10	7-682-548-04	SCREW +BVTT 3X8 (S)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

9-957-231-11

Sony Corporation
Audio Group

English
92F0459-1
Printed in Japan

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Published by Customer Relations and Service Group

TC-H6700/H6700D

SERVICE MANUAL

AEP Model
UK Model
TC-H6700

E Model
Tourist Model
TC-H6700D

This set is the cassette deck section in FH-E959, MHC-6700.

Photo : TC-H6700

Model Name Using Similar Mechanism	TC-H4700	
Tape Transport Mechanism Type	DECK A	TCM-190RA13A
	DECK B	TCM-190RB12A

SPECIFICATIONS

Recording system	4-track 2-channel stereo
Frequency response	(DOLBY NR OFF) 40 — 13,000 Hz (±3 dB), using TYPE I cassette (Sony HF-S) 40 — 14,000 Hz (±3 dB), using TYPE II cassette 40 — 15,000 Hz (±3 dB), using TYPE IV cassette
Wow and flutter	0.1% WRMS ±0.3% (DIN)
Inputs	PHONO (phono jacks): sensitivity 5 mV, impedance 47 kilohms VIDEO 1, 2 (phono jacks): sensitivity 300 mV, impedance 47 kilohms

Design and specifications subject to change without notice.

- Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.
  "DOLBY", the double-D symbol ▯▯ and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

SAFETY-RELATED COMPONENT WARNING!!

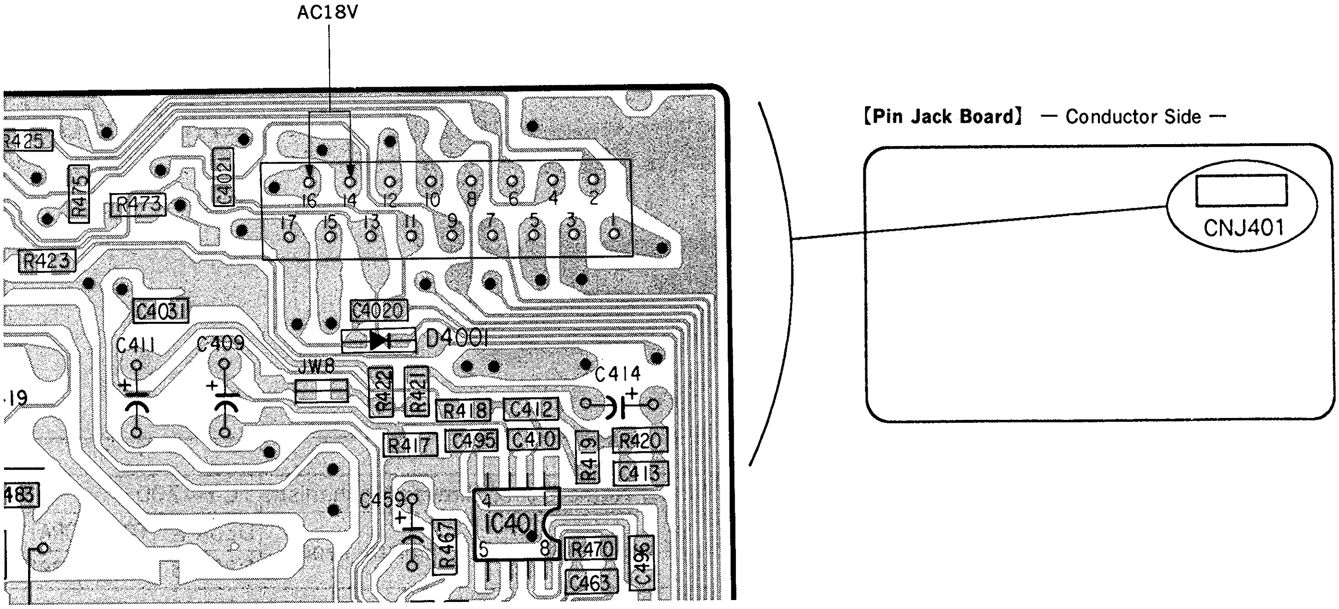
COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

STEREO CASSETTE DECK

SONY®

CAUTION WHEN REPAIRING

Normally the power of this set is supplied from the TA-H6700/H7700D amplifier connected. When only this set is repaired, connect the power of 18V AC as shown in the figure below.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R473
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R423
C4031
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R418
C412
R417
C495
C410
R419
R420
C413
C459
R467
IC401
R470
C463
C496
483
19
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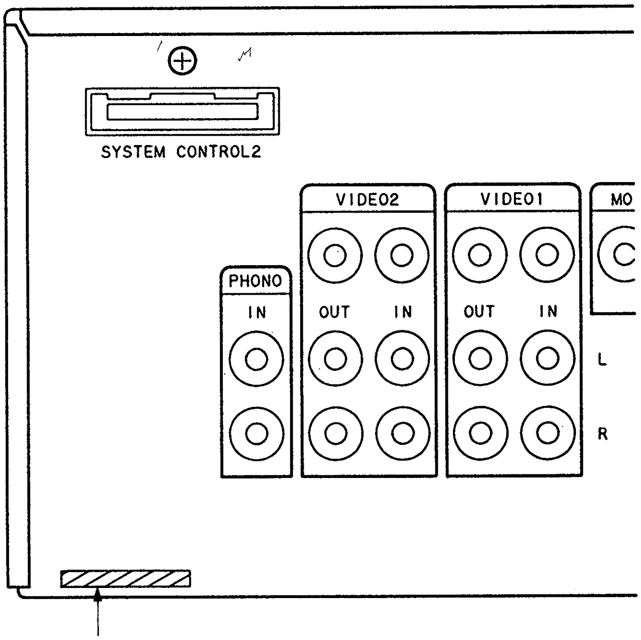
4 1 5 8
[Pin Jack Board] — Conductor Side —
CNJ401

MODEL IDENTIFICATION

— BACK PANEL —


SYSTEM CONTROL2
VIDEO2
VIDEO1
MO
PHONO
IN
OUT
IN
OUT
IN
L
R

3-374-471-61 (AE) : AEP, UK model
3-374-471-71 (AE4): Germany model
3-375-041-31 (E2/E3): E, Tourist model

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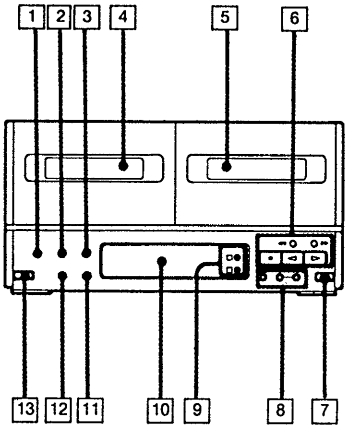
SECTION 1
GENERAL

This section is extracted from instruction manual.

1-1. PARTS IDENTIFICATION

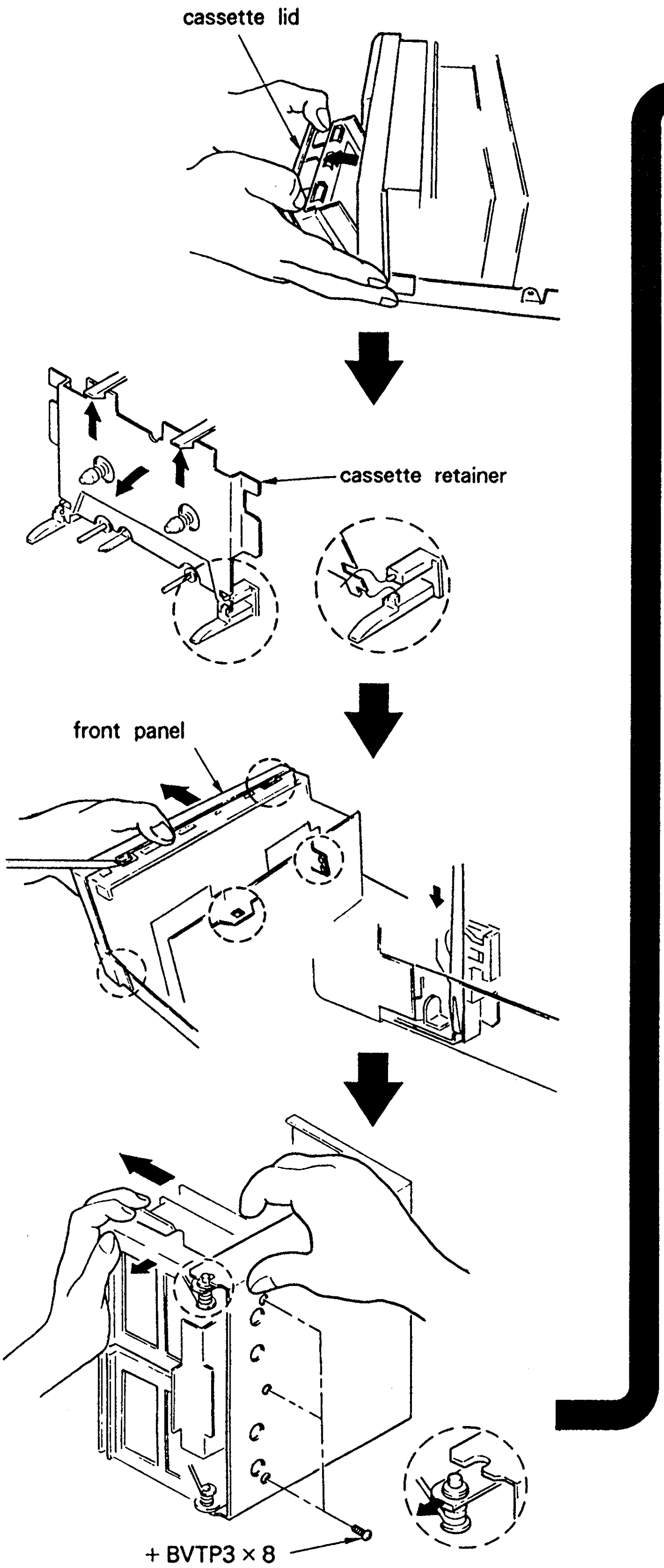


1 DUBBING MODE button and indicator (102)
2 CD SYNCHRO (CD synchronized recording) button and indicator (112) (122)
3 COUNTER RESET button (60)
Resets the counter of the cassette deck to "0".
4 Cassette holder (Deck A)
5 Cassette holder (Deck B)
6 Tape operation buttons (for Deck A and B)
◀◀ ▶▶ : Fast winding
■: Stop
▷: Forward play
◁: Reverse play
7 ⏏ EJECT button (Deck B)
8 Tape operation buttons (for Deck B)
‖: PAUSE
○: MUTE (muting)
●: REC (recording)
9 DECK A/B selection buttons (60)
10 Display window
11 DIRECTION MODE button (60) (68)
12 DOLBY NR (Dolby Noise Reduction) button (62)
13 ⏏ EJECT button (Deck A)

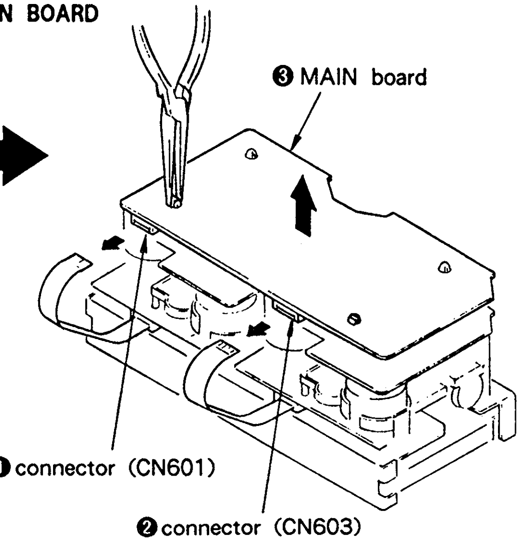
SECTION 2
DISASSEMBLY

NOTE : Follow the disassembly procedure in the numerical order given.

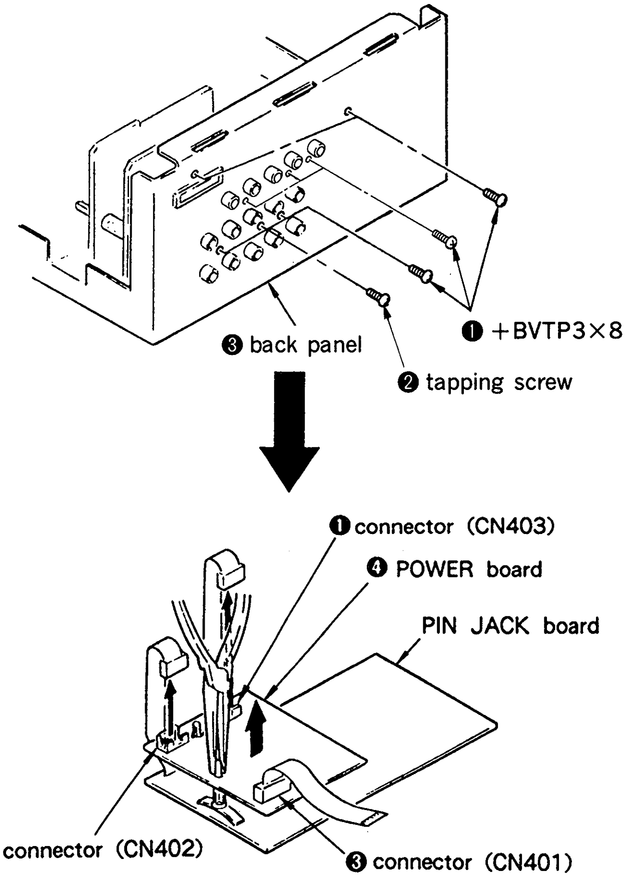
- **FRONT PANEL**


cassette lid
cassette retainer
front panel
+ BVTP3 × 8

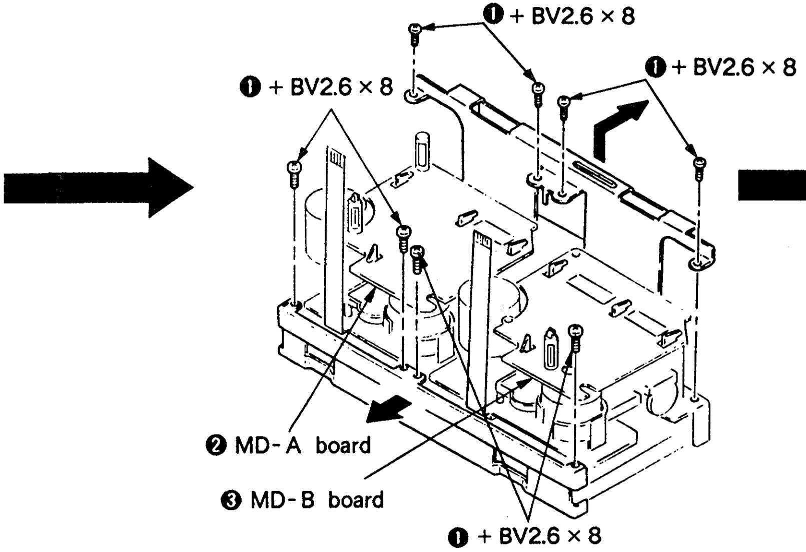
- **MAIN BOARD**


❸ MAIN board
❶ connector (CN601)
❷ connector (CN603)

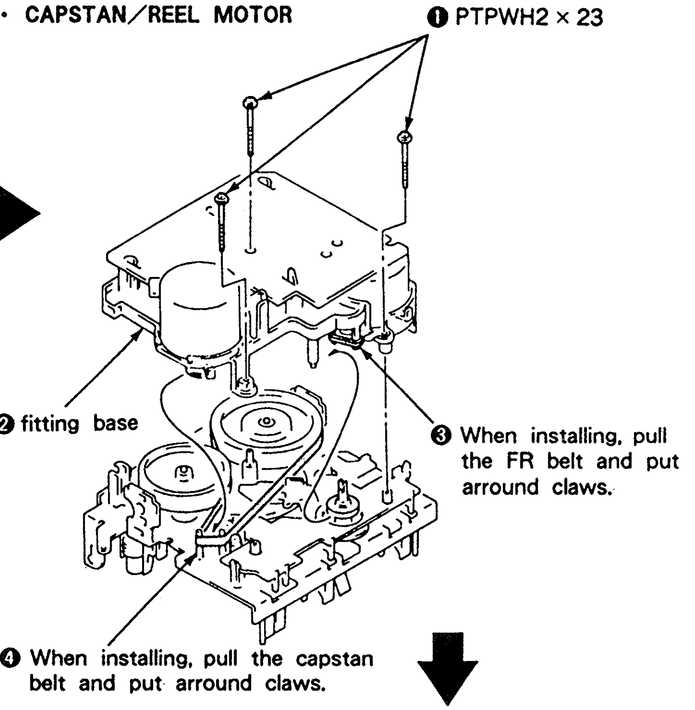
- **PIN JACK/POWER BOARD**

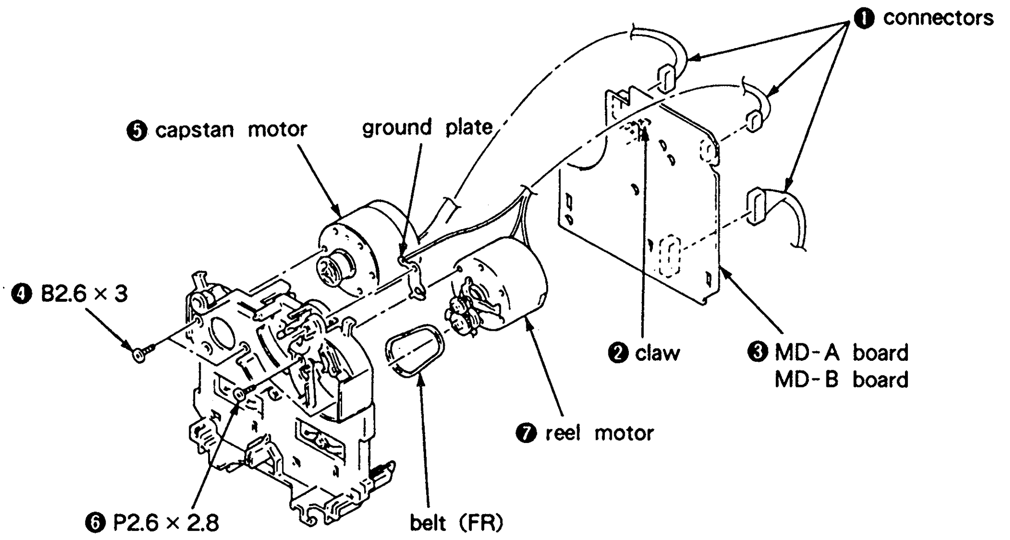

❸ back panel
❶ +BVTP3×8
❷ tapping screw
❶ connector (CN403)
❹ POWER board
PIN JACK board
❷ connector (CN402)
❸ connector (CN401)

- **MECHANISM DECK**

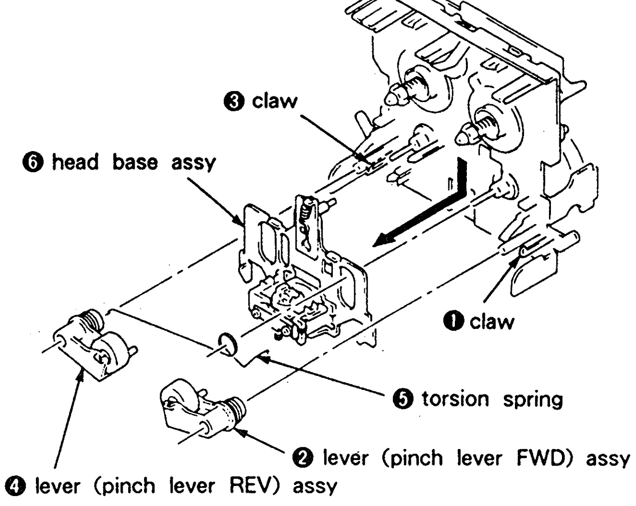

❶ + BV2.6 × 8
❶ + BV2.6 × 8
❶ + BV2.6 × 8
❷ MD- A board
❸ MD- B board
❶ + BV2.6 × 8

- **CAPSTAN/REEL MOTOR**


❶ PTPWH2 × 23
❷ fitting base
❸ When installing, pull the FR belt and put arround claws.
❹ When installing, pull the capstan belt and put arround claws.


❶ connectors
❺ capstan motor
ground plate
❹ B2.6 × 3
❷ claw
❸ MD- A board
MD- B board
❼ reel motor
❻ P2.6 × 2.8
belt (FR)

- **HEAD, PINCH ROLLER**


❸ claw
❻ head base assy
❶ claw
❺ torsion spring
❷ lever (pinch lever FWD) assy
❹ lever (pinch lever REV) assy

SECTION 3
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured alcoholmoistened swad:

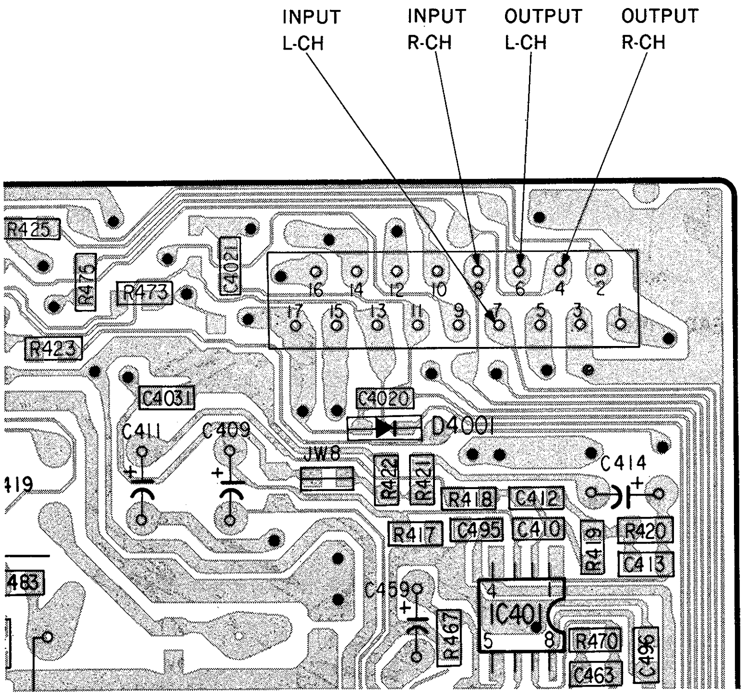
record/playback head	pinch roller
erase head	rubber belts
capstan	idlers

2. Demagnetize the record/playback head with a head demagnetizer.
   (Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be perfomed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	35 to 60g • cm (0.49 to 0.83 oz • inch)
Forward back tension	CQ-102C	2 to 6g • cm (0.03 to 0.08oz • inch)
Reverse	CQ-102RC	35 to 60g • cm (0.49 to 0.83oz • inch)
Reverse back tension	CQ-102RC	2 to 6g • cm (0.03 to 0.08oz • inch)
Forward, Reverse	CQ-201B	70 to 110g • cm (0.98 to 1.52 oz • inch)

LINE IN/OUT Terminal (CNJ401)


INPUT L-CH
INPUT R-CH
OUTPUT L-CH
OUTPUT R-CH
16
14
12
10
8
6
4
2
17
15
13
11
9
7
5
3
1
R425
R475
R473
C4021
R423
C4031
C4020
D4001
C411
C409
JW8
R422
R421
C414
419
R418
C412
R417
C495
C410
R419
R420
C413
483
C459
R467
IC401
R470
C463
C496

SECTION 4
ELECTRICAL ADJUSTMENTS

PRECAUTION

1. The adjustment should be performed in the publication.
   (Be sure to make playback adjustment at first.)
2. The adjustment and measurement should be performed for both L-CH and R-CH.
   - Switch position
     DOLBY NR switch: OFF

Test Tape

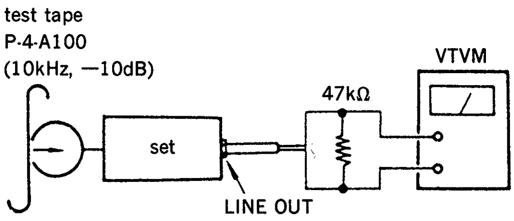
Tape	Contents	Use
P-4-A100	10kHz, −10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment

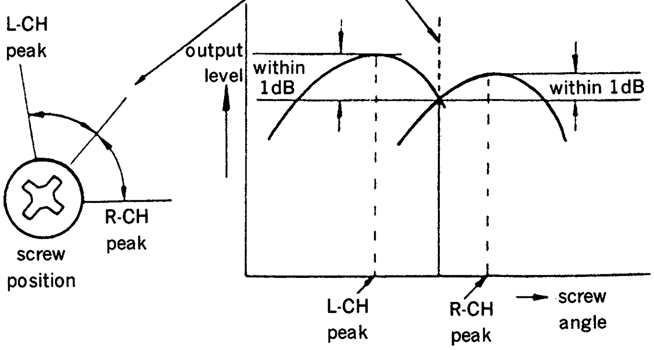
DECK A **DECK B**

Procedure:

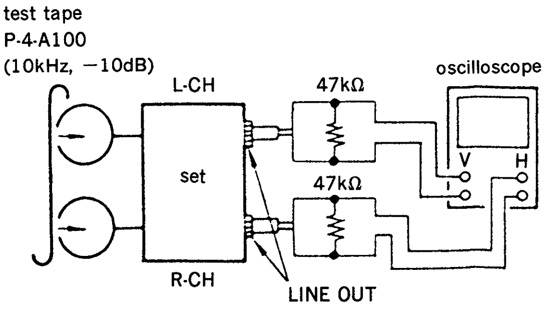
1. Forward Playback Mode

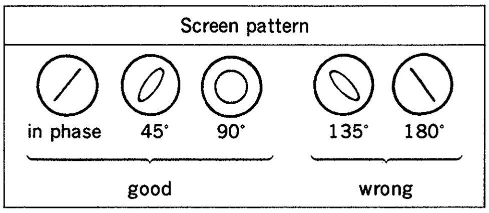

test tape
P-4-A100
(10kHz, −10dB)
VTVM
47kΩ
set
LINE OUT

2. Turn the adjustment screw for the maximum output levels. If these levels do notmatch, turn the adjustment screw until both of output levels match together within 1dB.



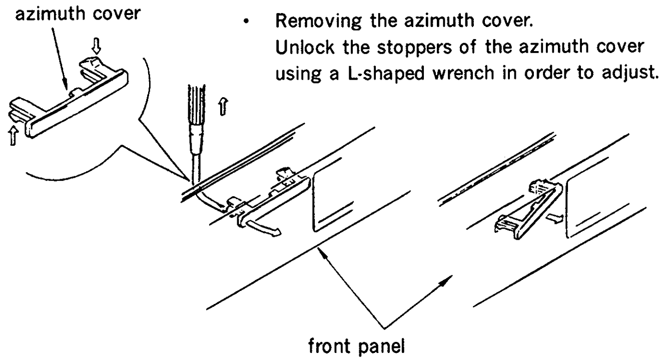
3. Playback Mode


test tape
P-4-A100
(10kHz, −10dB)
L-CH
R-CH
set
47kΩ
47kΩ
oscilloscope
V
H
LINE OUT

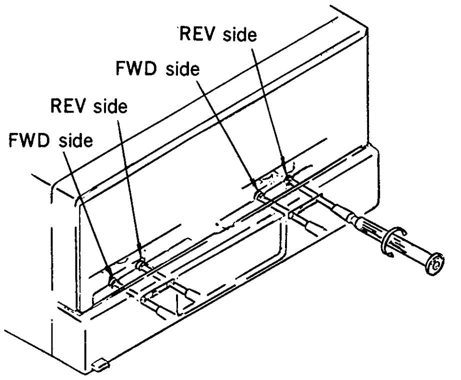

Screen pattern
in phase
45°
90°
135°
180°
good
wrong

4. Change the reverse playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screw with suitable locking compound.

Adjustment Location : —record/playback head—


azimuth cover
front panel

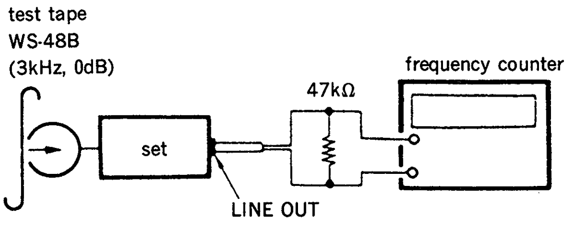
- Removing the azimuth cover.
  Unlock the stoppers of the azimuth cover using a L-shaped wrench in order to adjust.


REV side
FWD side
REV side
FWD side

Tape Speed Adjustment DECK A DECK B

Procedure :

—Forward Playback Mode—


test tape
WS-48B
(3kHz, 0dB)
set
47kΩ
frequency counter
LINE OUT

Perform high speed adjustment before normal speed adjustment.

(High speed adjustment)

1. Short TP601 (main board) when the power is OFF.
2. Turn on the power and put the deck A into the FWD mode.
3. Connect a 150Ω resistor to both the terminals of TP6001 (main board). (The set enters into high speed playback mode.)
4. Adjust RV72A (H) of the deck A so that a reading of the frequency counter meets the adjustment value.
5. Adjust the RV72B (H) of deck B performing steps 2 to 5 as deck A.
6. After the adjustment is completed, remove the short of TP601 and 150Ω resistor of TP6001.

(Normal speed adjustment)

1. Put the set into the FWD playback mode.
2. At this time, adjust RV71A (L) of the deck A and RV71B (L) of the deck B so that a reading of the frequency counter meets the adjustment value.

Adjustment Limits :

Speed	Frequency Counter Reading
High	6,000 ± 20Hz
Normal	3,000 ± 10Hz

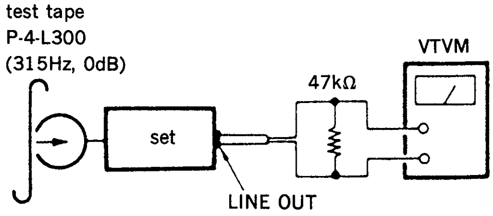
Frequency difference between the beginning and the end of the tape should be within 3%.
Frequency difference between deck A and deck B the beginning of the tape should be within 1.5%.

Adjustment Location : MD-A Board
MD-B HX PRO Board

Playback Level Adjustment DECK A DECK B

Procedure:

—Forward Playback Mode—


test tape
P-4-L300
(315Hz, 0dB)
VTVM
47kΩ
set
LINE OUT

Adjust deck A: RV11A (L-CH), RV21A (R-CH) and deck B: RV11B (L-CH), RV21B (R-CH) so that the VTVM reading becomes the adjustment limits below.

Adjustment Limits:

LINE OUT level: −7.5 ± 0.5dB (0.31 to 0.35V)

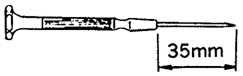
Level Difference between Channels: within 0.5dB

Confirm the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

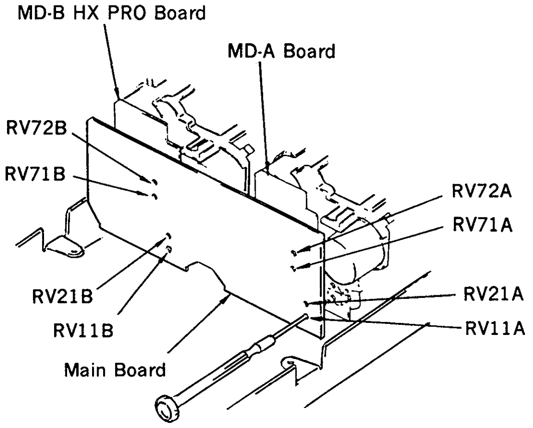
Adjustment Location: MD-A Board
MD-B HX PRO Board

Tape Speed/playback Level Adjustment

Screwdriver to adjust the MD block



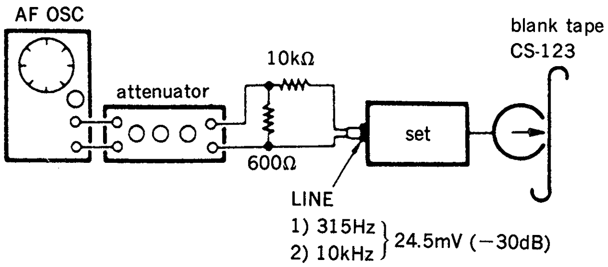
The MD block adjustment can be performed by inserting a screwdriver of which axis length (not including the shaft) is 35 mm or more through the rear side of the main board.


MD-B HX PRO Board
MD-A Board
RV72B
RV71B
RV72A
RV71A
RV21B
RV11B
RV21A
RV11A
Main Board

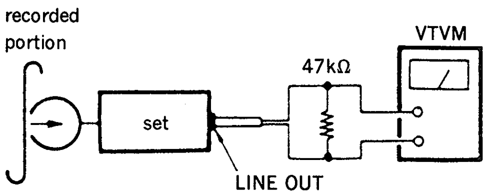
Record Bias Adjustment DECK B

Procedure:

1. Record Mode


AF OSC
attenuator
10kΩ
600Ω
set
blank tape
CS-123
LINE
1) 315Hz
2) 10kHz
24.5mV (−30dB)

2. Playback Mode


recorded
portion
VTVM
47kΩ
set
LINE OUT

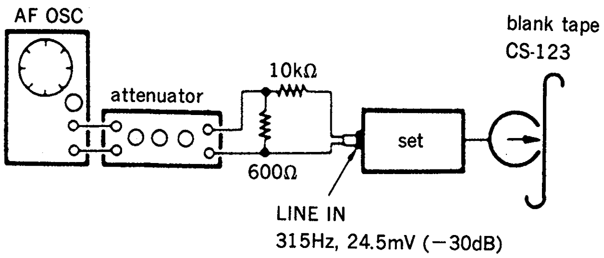
Playback the signal recorded in step 1.
Confirm that the 10kHz playback output is 0 ± 0.5dB (0.732 to 0.821V) relative to the 315Hz output. if necessary. adjust RV81 (L-CH), RV91 (R-CH) and repeat the steps given above.

Adjustment Location: MD-B HX PRO Board

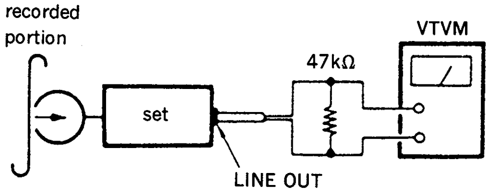
Record Level Adjustment **DECK B**

Procedure :

1. Record Mode


AF OSC
attenuator
10kΩ
600Ω
set
blank tape
CS-123
LINE IN
315Hz, 24.5mV (−30dB)

2. Playback Mode


recorded
portion
set
47kΩ
VTVM
LINE OUT

Confirm playback the tape recorded become adjustment level as follows.
If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat steps 1 and 2.

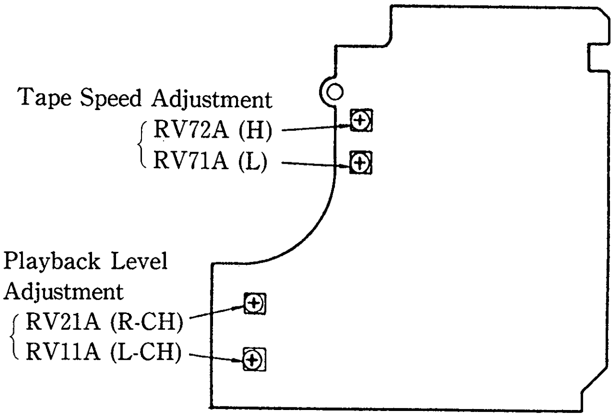
Adjustment Limits :

LINE OUT level : −27.5 ± 0.5dB (31 to 35mV)

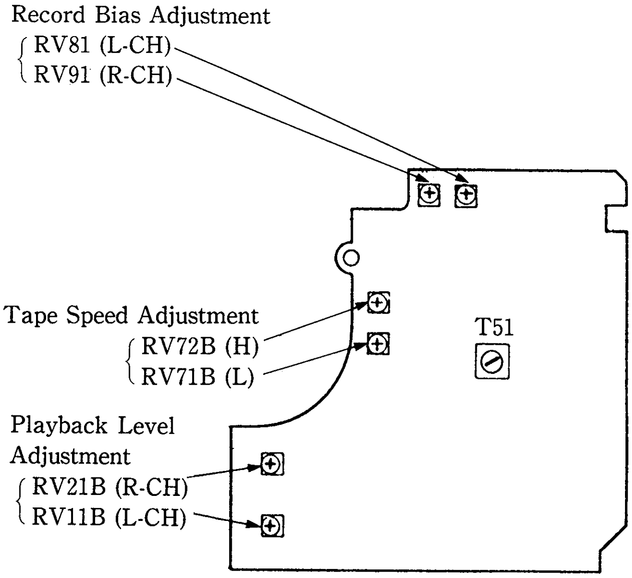
Adjustment Location : main board

Adjustment Location :

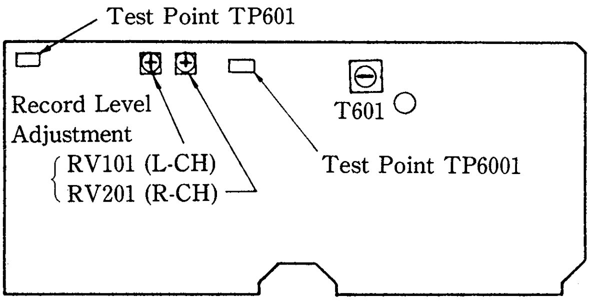
【MD-A Board】 —Component Side—


Tape Speed Adjustment
RV72A (H)
RV71A (L)
Playback Level
Adjustment
RV21A (R-CH)
RV11A (L-CH)

【MD-B HX PRO Board】 —Component Side—


Record Bias Adjustment
RV81 (L-CH)
RV91 (R-CH)
Tape Speed Adjustment
RV72B (H)
RV71B (L)
T51
Playback Level
Adjustment
RV21B (R-CH)
RV11B (L-CH)

【Main Board】 —Component Side—


Test Point TP601
Record Level
Adjustment
RV101 (L-CH)
RV201 (R-CH)
T601
Test Point TP6001

SECTION 5
DIAGRAMS

5-1. IC PIN DESCRIPTION

IC351 display microprocessor HD614023-FA93

Fluorescent indicator tube is activated by receiving data from IC601 (system controller).

Pin No.	Pin Name	I/O	Description
1—11	S10—S0	O	FL indicator tube (FL351) segment output
12			Not used. (+5.6V)
13	VDISP	—	Power supply for activating the FL indicator tube (−20V)
14—15			Not used (GND)
16	SYNC	I	Interrupt input. Data transmission from IC601 (system controller) is checked.
17	INT	I	Not used. (GND)
18—25		I	Not used. (GND)
26	V_{CC}	—	Power supply terminal (+5.6V)
27	CLK	I	Data transmission clock input from IC601 (system controller)
28	DATA	I	Serial data input from IC601 (system controller)
29	SYNC	I	Sync signal input which indicates the first byte of data sent from IC601 (system controller)
30		—	Not used. (GND)
31	KEY A	O	LED (D303) light output in the deck A.
32	KEY B	O	LED (D304) light output in the deck B.
33	HIGH DUB	O	LED (D301) light output in the high speed dubbing mode.
34	NORM DUB	O	LED (D301) light output in the normal speed dubbing mode.
35	CD SYNC	O	LED (D302) light output in the CD synchro mode.
36—38			Not used. (GND)
39	FLCHECK	I	All the FL indicator tubes are lit when this port is set to "L". (Normally +5.6V)
40—42			Not used. (GND)
43	RESET	I	Reset input from IC601 (system controller). "L" : Reset.
44	TEST	I	Not used. (+5.6V)
45	OSC1	I	Clock input (4.19MHz)
46	OSC2	O	Clock output
47	GND	—	Power supply terminal (GND)
48—50			Not used. (GND)
51			Not used. (Pull-up)
52—57	G0—G6	O	FL indicator tube (FL351) grid output
58—61			Not used. (+5.6V)
62—64	S11—S13	O	FL indicator tube (FL351) segment output

IC406 selector controller M50760-315FP

AV output is switched with the audio pass signal sent from the amplifier (TA-H6700/H7700D).

Pin No.	Pin Name	I/O	Description
1	D3	I	Model selection input port. Connected to GND.
2	A0	O	Audio IN switch (IC403 and IC404) control output port.
3			Not used.
4	A1	O	Audio IN switch (IC403 and IC404) control output port.
5	CNV_{SS}	—	Power supply terminal (GND)
6	V_{SS}	—	Power supply terminal (GND)
7	A2	O	Audio IN switch (IC403 and IC404) control output port.
8	B0	O	Audio OUT switch (IC405) control output port.
9	B1	O	Audio OUT switch (IC405) control output port.
10			Not used.
11, 12			Not used.
13, 14			Not used. (GND)
15			Not used.
16	RESET	I	Reset input. "L" : Reset
17	XOUT	O	Clock output.
18	XIN	I	Clock input.
19	S	I	Serial data input (audio bus)
20	D2	I	Serial data input (audio bus)
21	S1	I	Model selection input port. Connected to GND.
22			Not used.
23	VD0	I	Model selection input port. Connected to GND.
24	V_{DD}	—	Power supply terminal (+5V)

IC601 system controller M50944-128FP

The system is wholly controlled by communication between IC351 (display microcessor) and IC602 (mechanism controller).

Pin No.	Pin Name	I/O	Description
1	KEY2	I	Not used. (GND)
2	KEY1	I	Not used. (GND)
3	SYNC	O	Synchro signal input which indicates the first byte of data sent to IC351 (display microprocessor).
4	FL-SCK	O	Data transmission clock output to IC351 (display microprocessor).
5	FL-SO	O	Serial date output to IC351 (display microprtcessor).
6	AU-BUS	O	Audio pass output.
7	AU-BUS	I	Audio pass input (negative edge).
8	POWER-IN	I	Power-off detection input. “L” : Power OFF.
9	PB-SELECT	O	Deck A/B switch output in the playback mode. “L” : deck B, “H” : deck A.
10	AMS-SELECT	O	AMS amplifier input switch output
11	MD-REQ	I	Data request input from IC602 (mechanism controller)
12	MD-SCLK	O	Data transmission clock output to IC602 (mechanism controller)
13	MD-SO	O	Serial data output to IC602 (mechanism controller)
14	MD-SI	I	Serial data input from IC602 (mechanism controller)
15		O	Not used. (GND)
16	RESET (MD)	O	IC602 (mechanism controller) reset signal output.
17	AU-BUS	I	Audio bus input (positive-edge)
18	RESET (DSP)	O	IC351 (display microprocessor) reset signal output.
19	GND	—	Power supply terminal. (GND)
20	RESET	I	System reset input. “L” : Reset.
21	X-IN	I	Clock input (4MHz)
22	X-OUT	O	Clock output
23	XC-IN	I	Not used. (GND)
24	XC-OUT	O	Not used. (open)
25	VSS	—	Power supply terminal (GND)
26	N. C.		Not used. (open)
27	TEST	I	Electrical adjustment test mode setting input This set enters into the test mode when the power is on and it is set to “L”. ∗ 1
28	VAR SELECT	I	Not used. (pull-up)
29	METAL (B)	I	Metal switch (S83) input for deck B. “H” : Metal.
30	70μ (B)	I	Chrome switch (S82) input for deck B. “L” : Normal.
31	PPOWER-ON	O	Not used. (opes)
32—35			Not used. (GND)
36	70μ (A)	I	Chrome switch (S83) input for deck A. “L” : Normal.
37	AMS IN	I	Signal input from the AMS amplifier. “H” : Detected, “L” : Not detected.
38	N. C.		Not used. (GND)
39			Not used. (GND)
40	EQ-HIGH	O	REC equalizer characteristic switch output “H” : High speed, “L” : Normal speed.
41	BIAS FADE	O	Not used. (GND)
42	BIAS (B)	O	Bias ON/OFF switch output. “H” : OFF, “L” : ON.
43	TYPE II (B)	O	Not used. (GND)
44	TYPE I (B)	O	Not used. (GND)
45	R.MUTE (B)	O	REC mute control output. “L” : Mute ON, “H” : Mute OFF.
46	RELAY (B)	O	Mechanism deck head switch control output. “L” : ON.
47	DOLBY B	O	Dolby B/C switch control output. “L” : Dolby C, “H” : Dolby B.
48	DOLBY ON	O	Dolby ON/OFF switch control output. “L” : ON, “H” : OFF.
49	REC/PB	O	Dolby amplifier REC/PB switch output. “L” : REC, “H” : PB.
50			Not used. (open)
51	PB 70μ	O	Playback equalizer characterstic switch output. “H” : normal, “L” : chrome/metal.
52	AMS/BS	O	Not used.
53	PASS	O	PASS amplifier switch output for LINE OUT. “L” : PASS amplifier, “H” : Through.

Pin No.	Pin Name	I/O	Description
54	LINE-MUTE	O	Line mute control output. "L" : MUTE OFF, "H" : MUTE ON
55	AVCC	—	Power supply terminal. (+5V)
56	VCC	—	Power supply terminal. (+5V)
57	AVSS	—	Power supply terminal (GND)
58	V.REF	I	Reference voltage input for A/D input port (+5V)
59	METER (R)	I	Level meter signal input (R-CH)
60	METER (L)	I	Level meter signal input (L-CH)
61	VOL DATA	I	Not used. (GND)
62	KEY5	I	Not used. (GND)
63	KEY4	I	Key input. (analog) * 2
64	KEY3	I	Key input. (analog) * 2

* 1 Test mode
When the power is on and pin ㉗ is set to "L" Short TP601. (main board), the set enters the electrical adjustment test mode and the followings can be available.

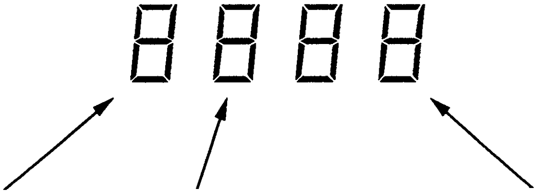
(1) High speed playback
When deck A or B is in the playback mode and a 150Ω resistor is connected to both the terminals of TP6001 (main board), the set can be entered the high speed playback mode.

(2) Source monitor
Recording signals can be monitored through the LINE OUT terminal (see page 6.) because the line short is removed in recording.

(3) Recording memory
Recording memory is set to ON when the tape counter is reset at the record start point.

(4) Mode display
The counter displays as shown in the figure A when the counter mode is set to the deck A and the deck A button of deck A/B switch is pressed, or when the counter mode is the deck B and the deck B button is pressed.

(5) When this terminal is set back to "H" after it is set to the test mode in "L" of the power-on mode, all the FL indicator tubes are lit.
(The mechanism block continues to operate as before it is set to "H".)



Key input (pin (64), KEY3)
"0" : DUBBING MODE
"3" : □
"4" : ▷
"5" : ◁
"6" : ▯▯
"7" : REC MUTE
"8" : DIRECTION MODE

Key input (pin (63), KEY4)
"0" : CD SYNCHRO
"1" : ▷▷
"2" : ◁◁
"3" : ● REC
"4" : KEY COUNTER B
"5" : KEY COUNTER A
"6" : COUNTER RESET
"8" : DOLBY NR

AMS signal
"1" : Component is detected.
"0" : Component is not detected.

Figure A

* 2 Key input (analog port)

Voltage(V) / Input port	0	0.3	0.7	1.2	1.7	2.3	2.8	3.3	4.0
Pin (63), KEY4	CD SYNCHRO	◁◁	▷▷	● REC	KEY COUNTER B	KEY COUNTER A	COUNTER RESET		DOLBY NR
Pin (64), KEY3	DUBBING MODE			□	▷	◁	▯▯ PAUSE	○ REC MUTE	DIRECTION MODE

IC602 mechanism controller M50925-482FP

The mechanism deck is controlled by receiving data from IC601 (system controller).

Pin No.	Pin Name	I/O	Description
1	RESET	I	Reset input from IC601 (system controller). "L" : Reset.
2	STOP-A	I	Deck A stop switch (S81) input. "H" : Stop.
3	AVSS	—	Power supply terminal (GND)
4	Vref	I	A/D inpout port reference voltage input.
5	A/D. IN-B	I	Deck B leaf switch input (analog). * 1
6	A/D. IN-A	I	Deck A leaf switch input (analog). * 1
7	AVDD	—	Power supply terminal. (+5V)
8	N. C.		
9	T. REEL-B	I	Not used. (GND)
10	S. REEL-B	I	Deck B supply reel table sensor (IC81)
11	T. REEL-A	I	Not used. (GND)
12	S. REEL-A	I	Deck A supply reel table sensor (IC81)
13, 14	N. C.		
15	CM. ON-A	O	Deck A capstan motor (M102) ON/OFF control output. "L" : OFF, "H" : ON.
16	CM. ON-B	O	Deck B capstan motor (M102) ON/OFF control output. "L" : OFF, "H" : ON.
17	GND	—	Power supply terminal. (GND)
18	VSS	—	Power supply terminal. (GND)
19	CM. H/L	O	Capstan motor (M102) speed switch output. "H" : High speed, "L" : Normal.
20	FWD-B	O	Deck B reel motor control output. * 2 The reel motor is activated by combining these three outputs.
21	FF-B	O	
22	TRIG-B	O	
23	FWD-A	O	Deck A reel motor control output. * 2 The reel motor is activated by combining these three outputs.
24	FF-A	O	
25	TRIG-A	O	
26	N. C.		
27	S. REQ	O	Data request output to IC601 (system controller).
28	S. CLK	I	Data transmission clock input from IC601 (system controller).
29	S. OUT	O	Serial data output to IC601 (system controller).
30	S. IN	I	Serial data input from IC601 (system controller).
31, 32	N. C.		
33	XOUT	O	Clock output.
34	XIN	I	Clock input.
35	STOP-B	I	Deck B stop switch (S81) input. "H" : Stop.
36	VDD	—	Power supply terminal. (+5V)

* 1 HALF, REC safety tab leaf switch input

Voltage(V) / Leaf switch		1	1.9	2.8	3.9	5
Harf	S86	ON				OFF
REC safety tab, side A	S84	OFF	ON	OFF	ON	OFF
REC safety tab, side B	S85	ON	ON	OFF	OFF	OFF
		↑ REC available for only side B.	↑ REC available for both sides	↑ REC inhibit for both sides A and B.	↑ REC available for only side A.	↑ Tape is not set.

Tape is set.

* 2 Reel motor drive

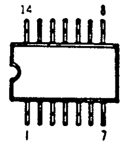
Mode / Output port	FF	TRIG (kick)	STOP	FWD
Pins ㉑and㉔ FF	L	H	L	L
Pins ㉒and㉕ TRIG	H	L	L	H
Pins ⑳and㉓ FWD	H	H	L	L

Reel motor drive amplifier output voltage

Output	Voltage
TRIG	+6V
FF, REW	−5V
FWD	−3V

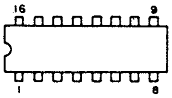
5-2. SEMICONDUCTOR LEAD LAYOUTS

BA3308F
CD4066BCM



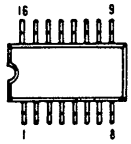
(TOP VIEW)

BA7625
HD14053BFP



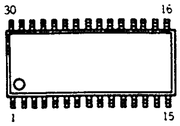
(TOP VIEW)

CD4052BCM
CXA1578M
MC14051BF



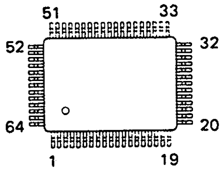
(TOP VIEW)

CXA1331M



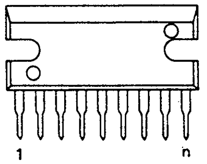
(TOP VIEW)

HD614023-FA93
M50944-128FP

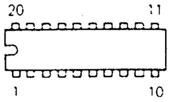

51
33
52
32
64
20
1
19

(TOP VIEW)

LA5603-S

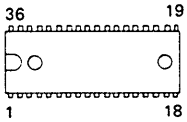


M50760-315FP



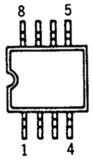
(TOP VIEW)

M50925-482FP



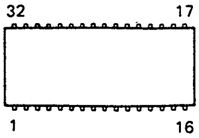
(TOPVIEW)

M51953BFP
μPC4570G2

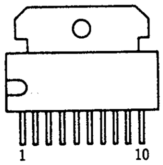


(TOP VIEW)

M5218AFP

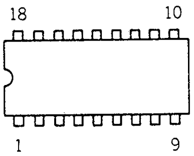


TA7272P



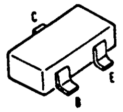
marking side view

μPC1297CA

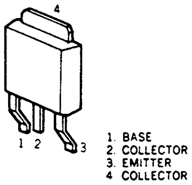


(TOP VIEW)

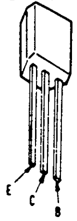
FA1A4M-L33
FA1A4Z-L68
2SA1162-C
2SA1602-F
2SC3395
2SC4154-F



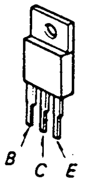
2SA1341


4
1
2
3
1. BASE
2. COLLECTOR
3. EMITTER
4. COLLECTOR

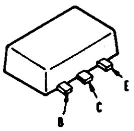
2SA1344



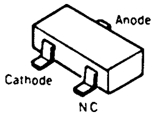
2SB1094-LK
2SD2012



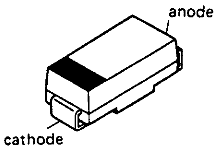
2SB1122-S
2SD1622-S



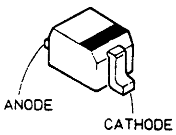
DCA010


Anode
Cathode
NC

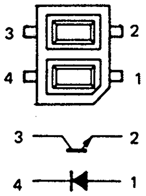
EC10DS2
EC10QS-04


anode
cathode

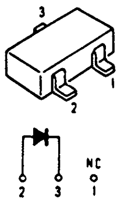
MA8056
MA8091
1SS352


ANODE
CATHODE

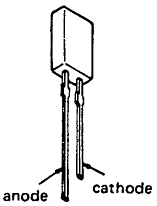
NJL5165K-B



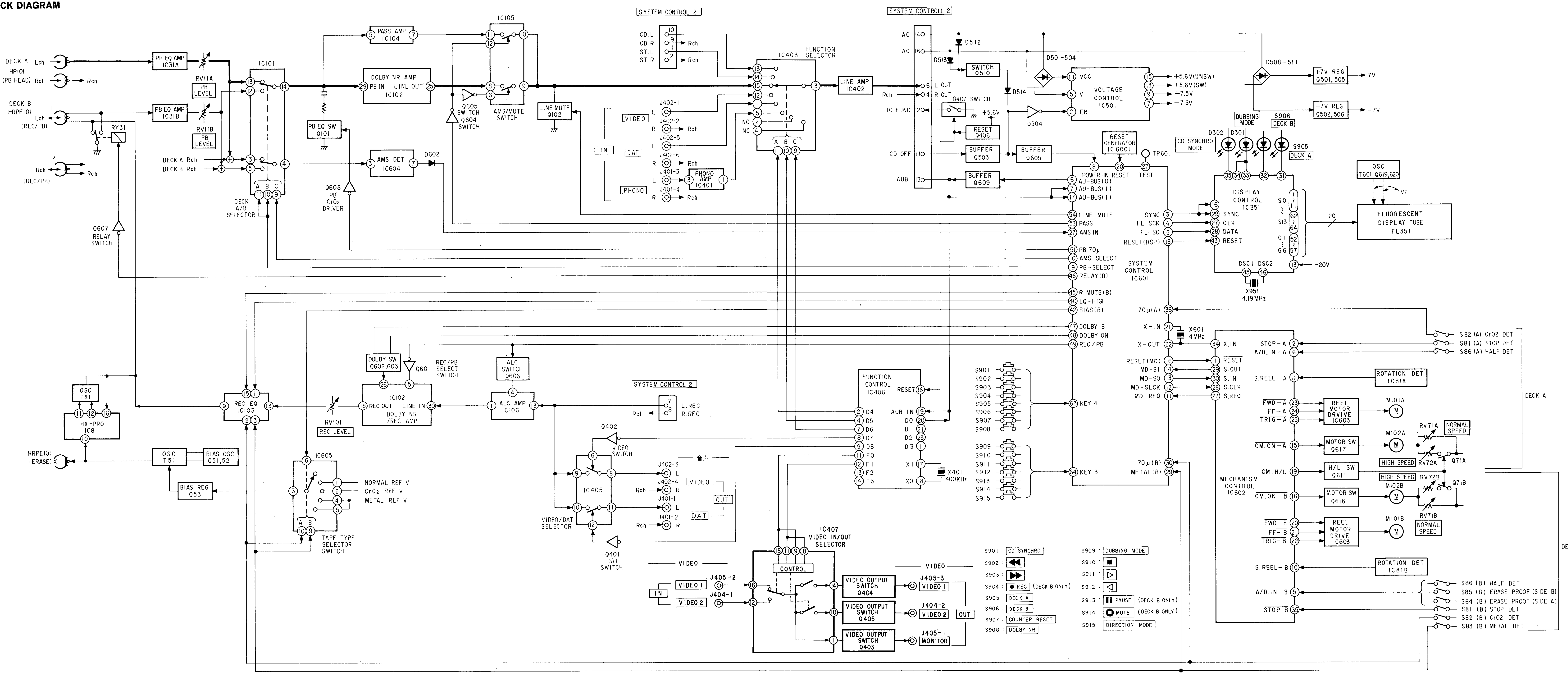
UZM8.2Z



SEL4226R-CD


anode
cathode

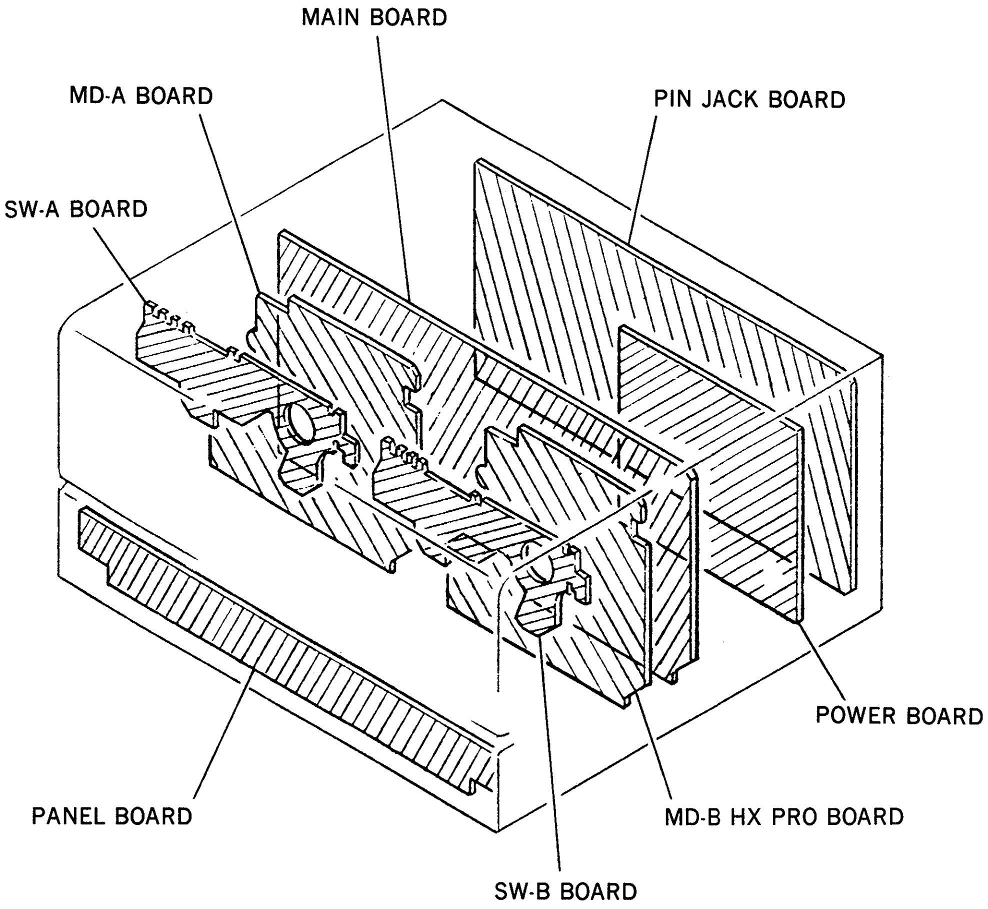
5-3. BLOCK DIAGRAM



DECK A
HP101
(PB HEAD)
Lch
Rch
DECK B
HRPE101
(REC/PB)
-1
-2
RY31
PB EQ AMP IC31A
PB EQ AMP IC31B
RV11A PB LEVEL
RV11B PB LEVEL
IC101
DECK A Rch
DECK B Rch
DECK A/B SELECTOR
Q607 RELAY SWITCH
PASS AMP IC104
DOLBY NR AMP PB IN LINE OUT IC102
PB EQ SW Q101
AMS DET IC604
D602
Q608 PB CrO2 DRIVER
Q605 SWITCH
Q604 SWITCH
IC105
AMS/MUTE SWITCH
LINE MUTE Q102
SYSTEM CONTROL 2
CD.L
CD.R
ST.L
ST.R
IC403 FUNCTION SELECTOR
VIDEO
DAT
IN
PHONO
J402-1
J402-2
J402-5
J402-6
J401-3
J401-4
PHONO AMP IC401
NC
LINE AMP IC402
SYSTEM CONTROLL 2
AC
TC FUNC
CD OFF
AUB
L OUT
R OUT
Q407 SWITCH
+5.6V
D512
D513
SWITCH Q510
D514
RESET Q406
BUFFER Q503
BUFFER Q605
BUFFER Q609
Q504
D501-504
VCC
V
EN
VOLTAGE CONTROL IC501
+5.6V(UNSW)
+5.6V(SW)
+7.5V
-7.5V
D508-511
+7V REG Q501,505
7V
-7V REG Q502,506
-7V
RESET GENERATOR IC6001
TP601
POWER-IN RESET
TEST
AU-BUS(O)
AU-BUS(I)
AU-BUS(I)
LINE-MUTE
PASS
AMS IN
PB 70μ
AMS-SELECT
PB-SELECT
RELAY(B)
R.MUTE(B)
EQ-HIGH
BIAS(B)
DOLBY B
DOLBY ON
REC/PB
SYSTEM CONTROL IC601
SYNC
FL-SCK
FL-SO
RESET(DSP)
70μ(A)
X-IN
X-OUT
X601 4MHz
RESET(MD)
MD-SI
MD-SO
MD-SLCK
MD-REQ
KEY 4
KEY 3
70μ(B)
METAL(B)
CD SYNCHRO MODE
D302
D301
DUBBING MODE
S906 DECK B
S905 DECK A
DISPLAY CONTROL IC351
SYNC
CLK
DATA
RESET
S0 ~ S13
G1 ~ G6
DSC1 DSC2
X951 4.19MHz
-20V
20
OSC T601,Q619,620
Vf
FLUORESCENT DISPLAY TUBE FL351
X.IN
RESET
S.OUT
S.IN
S.CLK
S.REQ
MECHANISM CONTROL IC602
STOP-A
A/D.IN-A
S.REEL-A
FWD-A
FF-A
TRIG-A
CM.ON-A
CM.H/L
CM.ON-B
FWD-B
FF-B
TRIG-B
S.REEL-B
A/D.IN-B
STOP-B
ROTATION DET IC81A
REEL MOTOR DRIVE IC603
M101A
MOTOR SW Q617
M102A
RV71A NORMAL SPEED
HIGH SPEED RV72A
Q71A
H/L SW Q611
HIGH SPEED RV72B
Q71B
MOTOR SW Q616
M102B
RV71B NORMAL SPEED
REEL MOTOR DRIVE IC603
M101B
ROTATION DET IC81B
S82 (A) CrO2 DET
S81 (A) STOP DET
S86 (A) HALF DET
DECK A
DECK B
S86 (B) HALF DET
S85 (B) ERASE PROOF (SIDE B)
S84 (B) ERASE PROOF (SIDE A)
S81 (B) STOP DET
S82 (B) CrO2 DET
S83 (B) METAL DET
S901
S902
S903
S904
S905
S906
S907
S908
S909
S910
S911
S912
S913
S914
S915
FUNCTION CONTROL IC406
RESET
D4
D5
D6
D7
D8
F0
F1
F2
F3
AUB IN
D0
D1
D2
D3
X1
X0
X401 400KHz
OSC T81
HX-PRO IC81
HRPE101 (ERASE)
OSC T51
BIAS OSC Q51,52
BIAS REG Q53
REC EQ IC103
DOLBY SW Q602,603
Q601 REC/PB SELECT SWITCH
IC102 REC OUT LINE IN DOLBY NR /REC AMP
RV101 REC LEVEL
ALC SWITCH Q606
ALC AMP IC106
SYSTEM CONTROL 2
L.REC
R.REC
IC605
NORMAL REF V
CrO2 REF V
METAL REF V
TAPE TYPE SELECTOR SWITCH
Q402 VIDEO SWITCH
IC405
VIDEO/DAT SELECTOR
Q401 DAT SWITCH
J402-3
J402-4
J401-1
J401-2
音声
VIDEO
OUT
DAT
IC407 VIDEO IN/OUT SELECTOR
CONTROL
VIDEO
J405-2
J404-1
VIDEO 1
VIDEO 2
VIDEO OUTPUT SWITCH Q404
VIDEO OUTPUT SWITCH Q405
VIDEO OUTPUT SWITCH Q403
J405-3
J404-2
J405-1
MONITOR
S901 : CD SYNCHRO
S902 : ◀◀
S903 : ▶▶
S904 : ● REC (DECK B ONLY)
S905 : DECK A
S906 : DECK B
S907 : COUNTER RESET
S908 : DOLBY NR
S909 : DUBBING MODE
S910 : ■
S911 : ▷
S912 : ◁
S913 : ❚❚ PAUSE (DECK B ONLY)
S914 : ● MUTE (DECK B ONLY)
S915 : DIRECTION MODE

04

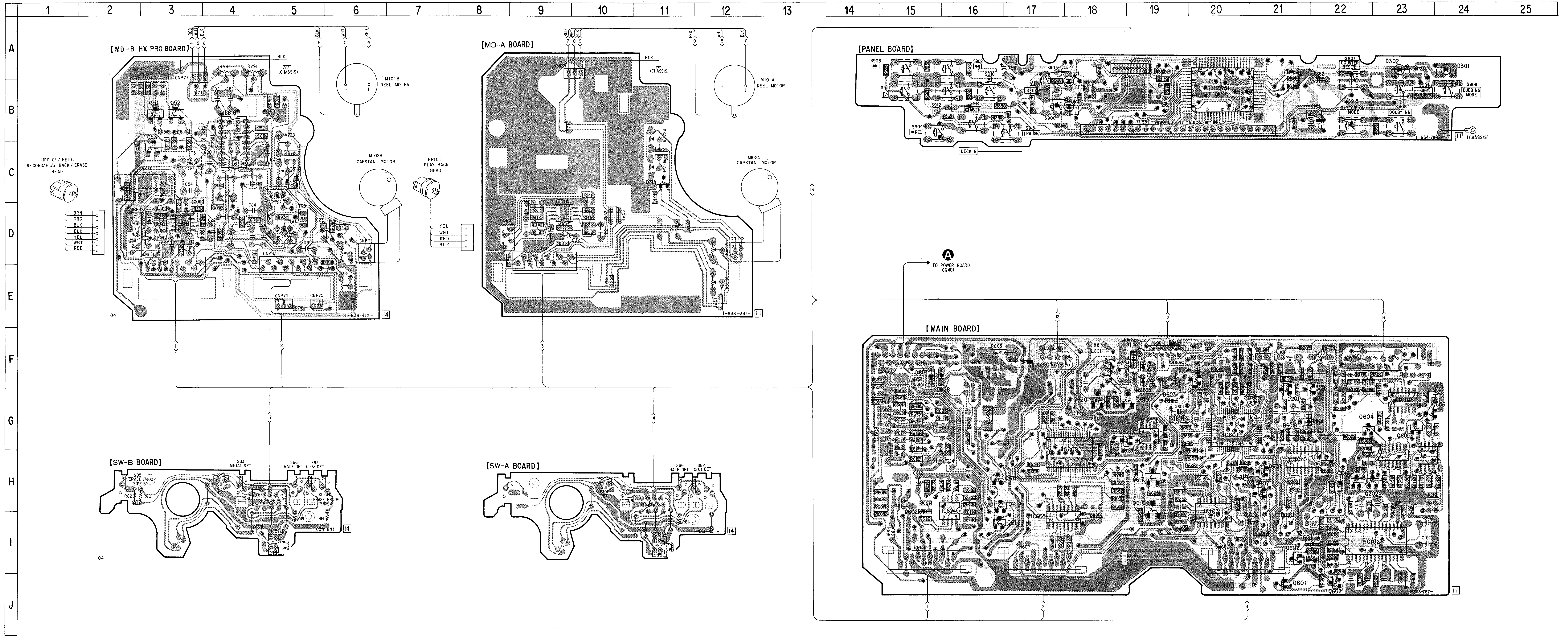
5-4. CIRCUIT BOARDS LOCATION


MAIN BOARD
MD-A BOARD
PIN JACK BOARD
SW-A BOARD
POWER BOARD
PANEL BOARD
MD-B HX PRO BOARD
SW-B BOARD

5-5. SCHEMATIC DIAGRAM —MAIN SECTION— • Refer to page 36 for IC Block Diagrams.

[MAIN BOARD]
IC101
IC102
IC103
IC104
IC105
IC106
IC604
IC605
IC603 (1/2)
IC603 (2/2)
IC601
IC6001
IC602
TO POWER BOARD
[MD-A BOARD]
IC31
[SW-A BOARD]
IC81
[SW-B BOARD]
IC81
[PANEL BOARD]
IC351
[MD-B HX PRO BOARD]
IC31
IC31
IC81

5-6. PRINTED WIRING BOARDS —MAIN SECTION— • Refer to page 14 for Semiconductor Lead Layouts.



[MD-B HX PRO BOARD]
M101B REEL MOTER
HRP101 / HE101 RECORD/PLAY BACK / ERASE HEAD
M102B CAPSTAN MOTOR
(CHASSIS)
[MD-A BOARD]
M101A REEL MOTOR
HP101 PLAY BACK HEAD
M102A CAPSTAN MOTOR
[PANEL BOARD]
DECK B
(CHASSIS)
TO POWER BOARD CN401
[MAIN BOARD]
[SW-B BOARD]
[SW-A BOARD]
S83 METAL DET
S86 HALF DET
S82 CrO2 DET
S85 ERASE PROOF (SIDE B)
ERASE PROOF (SIDE A)
BRN
ORG
BLK
BLU
YEL
WHT
RED
1-638-412-
1-638-397-

Note on Schematic Diagram:
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : nonflammable resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- ▬ : B+ Line
- ▬ ▬ : B– Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : STOP
  ( ) : PB
  < > : REC
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⊳ : PB (DECK A) ⊳⊳ : REC (DECK B)
  ⊳⊳ : REC (DECK A)

• Semiconductor Location

Ref. No.	Location
D31	C-2
D301	B-24
D302	A-23
D601	I-21
D602	I-15
D603	G-19
D604	F-19
D605	F-19
D606	F-19
D607	F-15
D608	F-15
D6010	G-21
D6011	G-21
IC31A	D-9
IC31B	D-3
IC81A	I-11
IC81B	I-5
IC81C	B-4
IC101	H-21
IC102	I-22
IC103	I-20
IC104	H-23
IC105	H-23
IC106	G-23
IC351	B-20
IC601	G-20
IC602	H-17
IC603	G-15
IC604	I-16
IC605	I-17
IC6001	G-19
Q51	B-3
Q52	B-3
Q53	C-3
Q71A	C-11
Q71B	C-5
Q101	G-21
Q102	H-22
Q201	G-21
Q202	H-22
Q601	J-21
Q602	I-21
Q603	J-22
Q604	G-22
Q605	G-23
Q606	G-23
Q607	H-21
Q608	H-21
Q609	F-20
Q611	H-16
Q612	I-16
Q613	H-16
Q616	H-19
Q617	H-19
Q619	G-18
Q620	G-18
Q6005	G-18

Note on Printed Wiring Board:
- ○— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.

5-7. SCHEMATIC DIAGRAM —PIN JACK SECTION— • Refer to page 36 for IC Block Diagrams.

[PINJACK BOARD]
[POWER BOARD]
SYSTEM CONTROL 2
IC401 (1/2) PHONO AMP
IC401 (1/2) PHONO AMP
IC402 (1/2) LINE AMP
IC402 (2/2) LINE AMP
IC403 FUNCTION SELECTOR
IC404 FUNCTION SELECTOR
IC405 IN/OUT SELECTOR
IC406 FUNCTION CONTROL
IC407 VIDEO IN/OUT SELECTOR
IC501 VOLTAGE CONTROL
Q403-405 VIDEO OUTPUT SWITCH
AUDIO
VIDEO
IN
OUT
L
R
PHONO
VIDEO1
VIDEO2
MONITOR
TO MAIN BOARD CN605
A
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
A B C D E F G H I

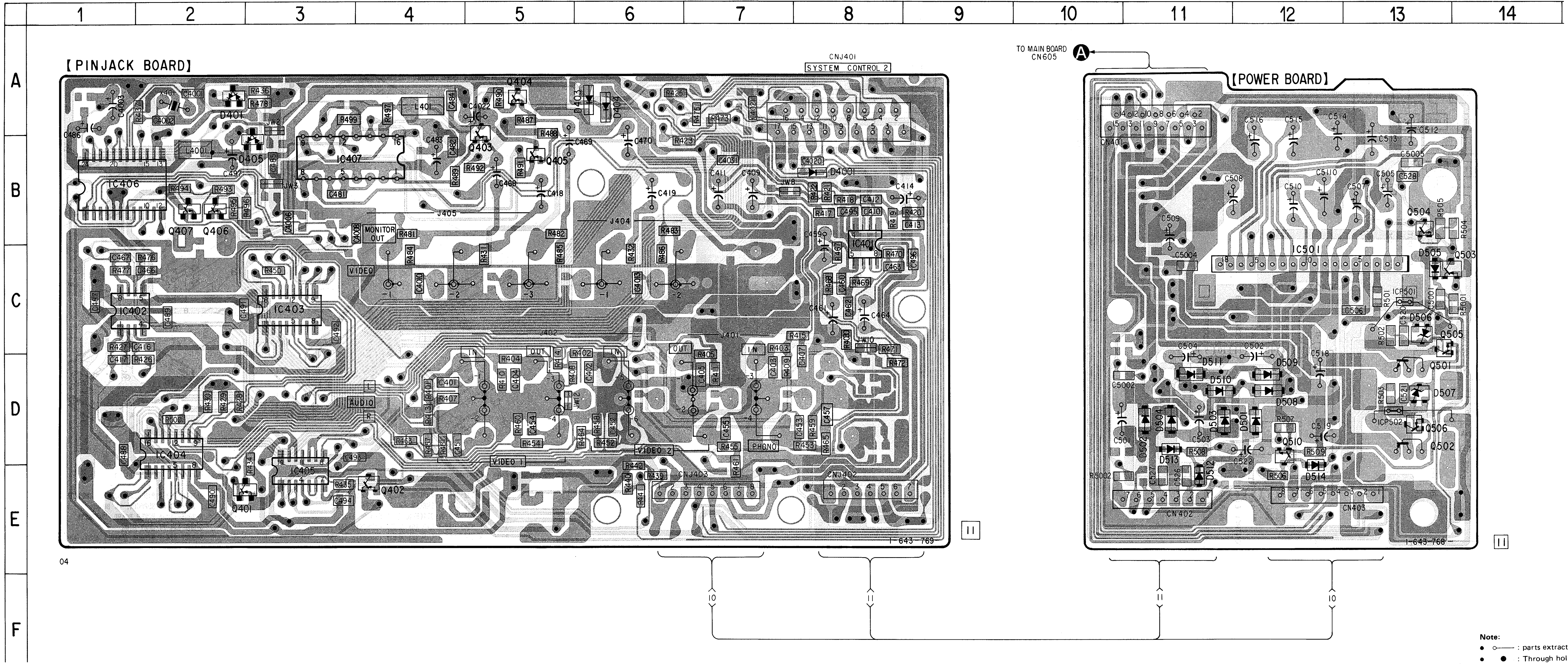
Note:
- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¹⁄₄W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ○ ▭▭▭ : B+ Line
- ○ ▭▭▭ : B– Line
- ○ Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : STOP
  (   ) : PB
  <   > : REC
- ○ Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- **Signal path.**
  ⊳ : PB (DECK A)
  ⊳⊳ : REC (DECK A)
  ▭⊳ : REC (DECK B)

5-8. PRINTED WIRING BOARDS —PIN JACK SECTION—

• Refer to page 14 for Semiconducter Lead Layouts.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
【PINJACK BOARD】
CNJ401
SYSTEM CONTROL 2
TO MAIN BOARD
CN605
A
【POWER BOARD】
MONITOR OUT
VIDEO
AUDIO
L
R
IN
OUT
VIDEO 1
VIDEO 2
PHONO
J401
J402
J404
J405
CNJ402
CNJ403
CN401
CN402
CN403
IC401
IC402
IC403
IC404
IC405
IC406
IC407
IC501
1-643-769
1-643-768
10
11
04

• Semiconductor Location

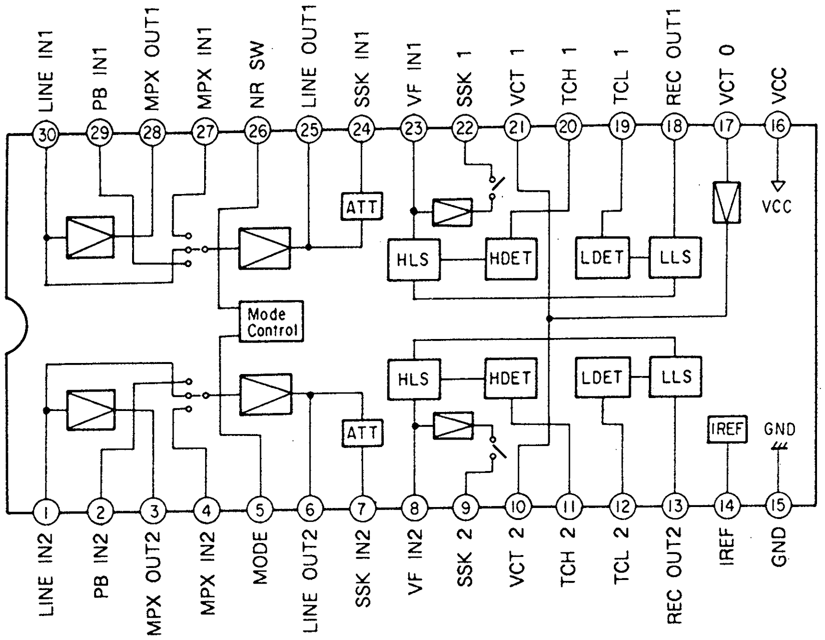
Ref. No.	Location
D401	A-2
D403	A-6
D404	A-6
D405	B-3
D501	D-12
D502	D-11
D503	D-11
D504	D-11
D505	C-13
D506	C-13
D507	D-13
D508	D-12
D509	D-12
D510	D-11
D511	D-11
D512	E-11
D513	D-11
D514	E-12
D4001	B-8
IC401	B-8
IC402	C-1
IC403	C-3
IC404	D-2
IC405	E-3
IC406	B-1
IC407	B-3
IC501	C-12
Q401	E-2
Q402	E-4
Q403	A-5
Q404	A-5
Q405	B-5
Q406	B-2
Q407	B-2
Q501	D-13
Q502	D-13
Q503	C-13
Q504	B-13
Q505	C-13
Q506	D-13
Q510	D-12

Note:

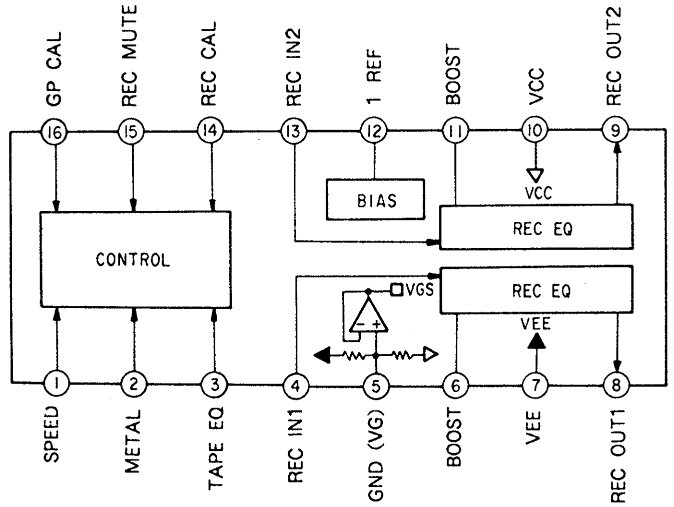
- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.

● IC Block Diagrams

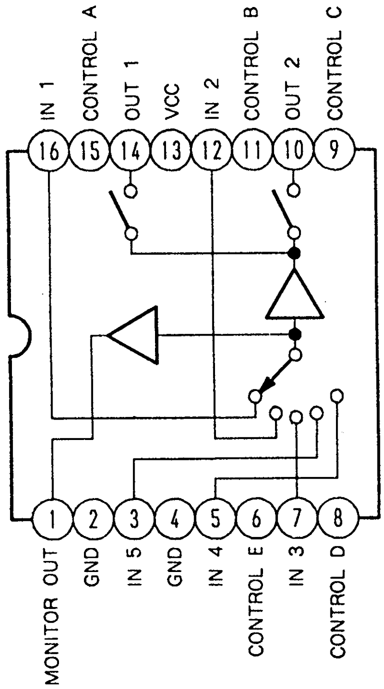
IC102 CXA1331M


LINE IN1
PB IN1
MPX OUT1
MPX IN1
NR SW
LINE OUT1
SSK IN1
VF IN1
SSK 1
VCT 1
TCH 1
TCL 1
REC OUT1
VCT 0
VCC
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
VCC
ATT
HLS
HDET
LDET
LLS
Mode Control
HLS
HDET
LDET
LLS
ATT
IREF
GND
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
LINE IN2
PB IN2
MPX OUT2
MPX IN2
MODE
LINE OUT2
SSK IN2
VF IN2
SSK 2
VCT 2
TCH 2
TCL 2
REC OUT2
IREF
GND

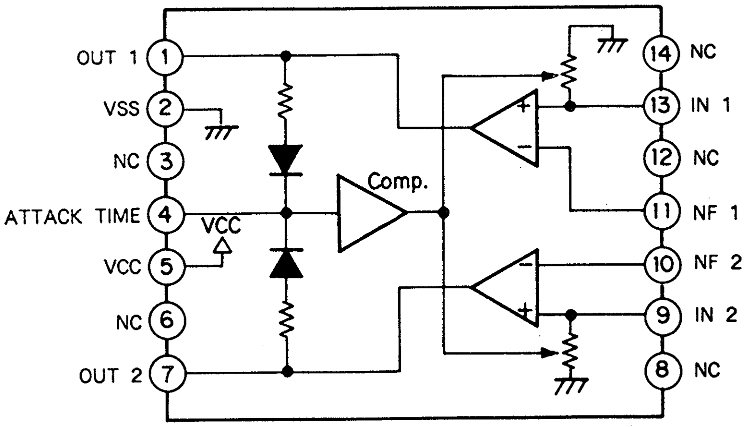
IC103 CXA1578M


GP CAL
REC MUTE
REC CAL
REC IN2
1 REF
BOOST
VCC
REC OUT2
16
15
14
13
12
11
10
9
VCC
BIAS
REC EQ
CONTROL
VGS
REC EQ
VEE
1
2
3
4
5
6
7
8
SPEED
METAL
TAPE EQ
REC IN1
GND (VG)
BOOST
VEE
REC OUT1

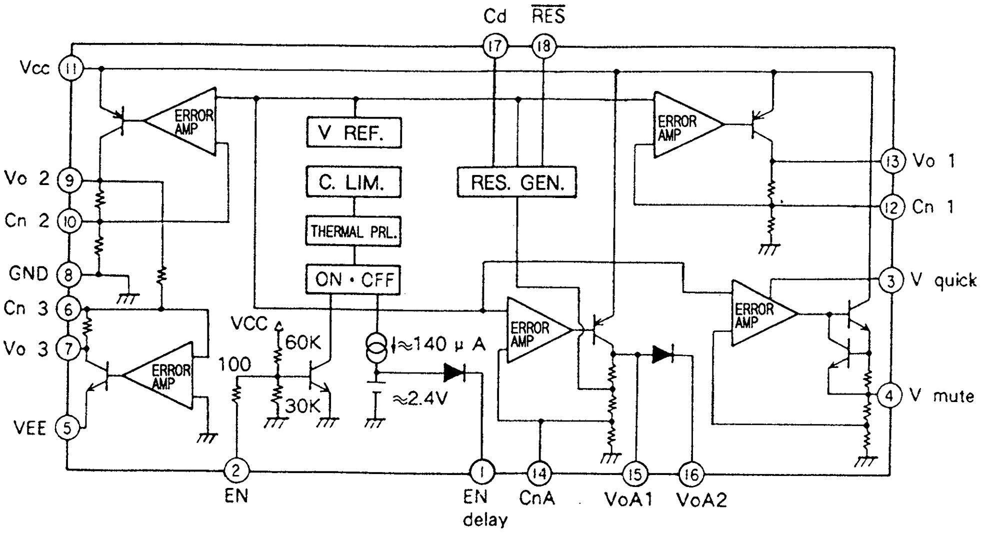
IC407 BA7625


IN 1
CONTROL A
OUT 1
VCC
IN 2
CONTROL B
OUT 2
CONTROL C
16
15
14
13
12
11
10
9
1
2
3
4
5
6
7
8
MONITOR OUT
GND
IN 5
GND
IN 4
CONTROL E
IN 3
CONTROL D

IC106 BA3308F


OUT 1
1
VSS
2
NC
3
ATTACK TIME
4
VCC
VCC
5
NC
6
OUT 2
7
Comp.
14
NC
13
IN 1
12
NC
11
NF 1
10
NF 2
9
IN 2
8
NC

IC501 LA5603-S

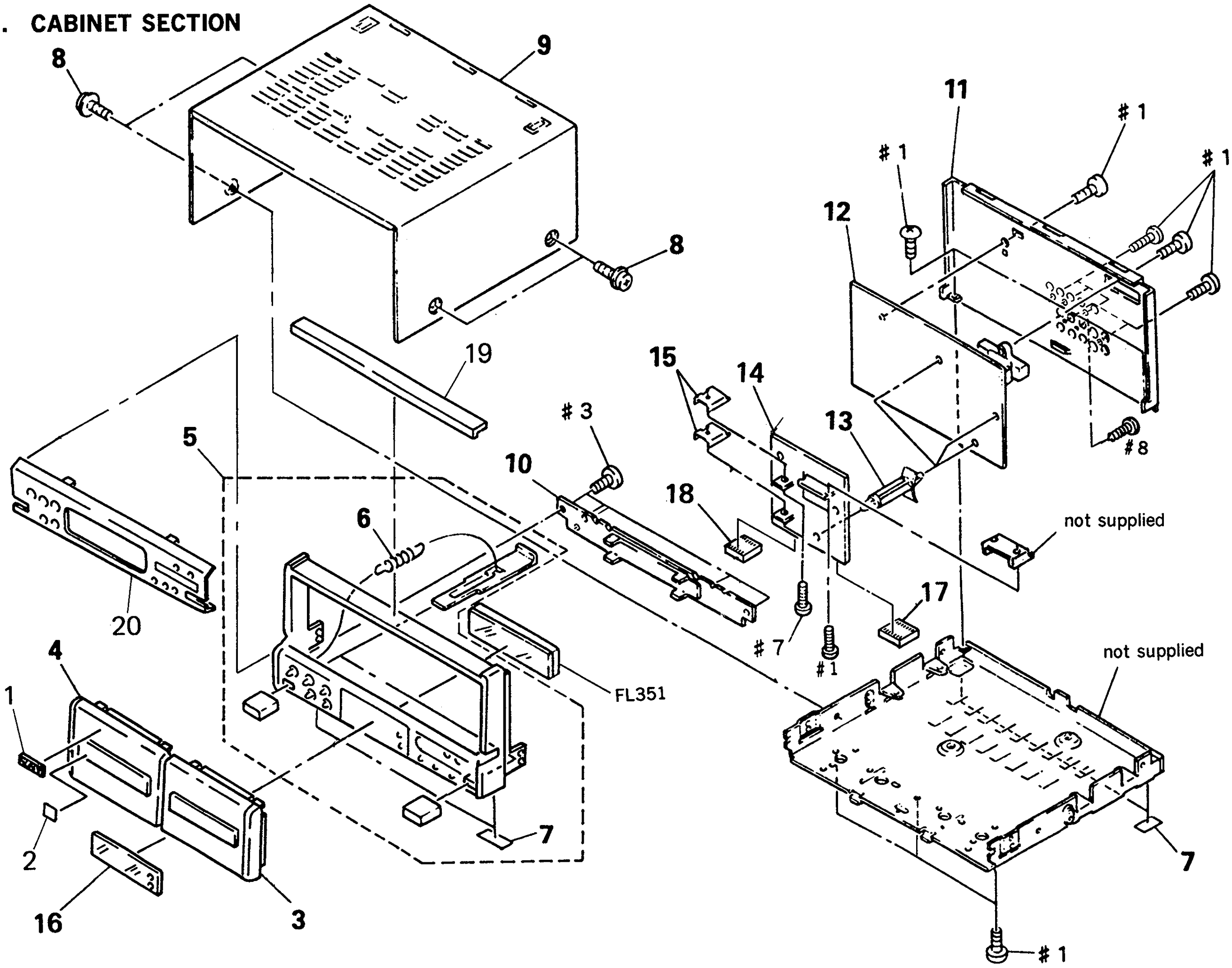

Cd
RES
17
18
Vcc 11
Vo 2 9
Cn 2 10
GND 8
Cn 3 6
Vo 3 7
VEE 5
ERROR AMP
V REF.
C. LIM.
THERMAL PRL.
ON • CFF
RES. GEN.
VCC
60K
30K
100
≈140 μ A
≈2.4V
13 Vo 1
12 Cn 1
3 V quick
4 V mute
2 EN
1 EN delay
14 CnA
15 VoA1
16 VoA2

SECTION 6
EXPLEDED VIEWS

NOTE:

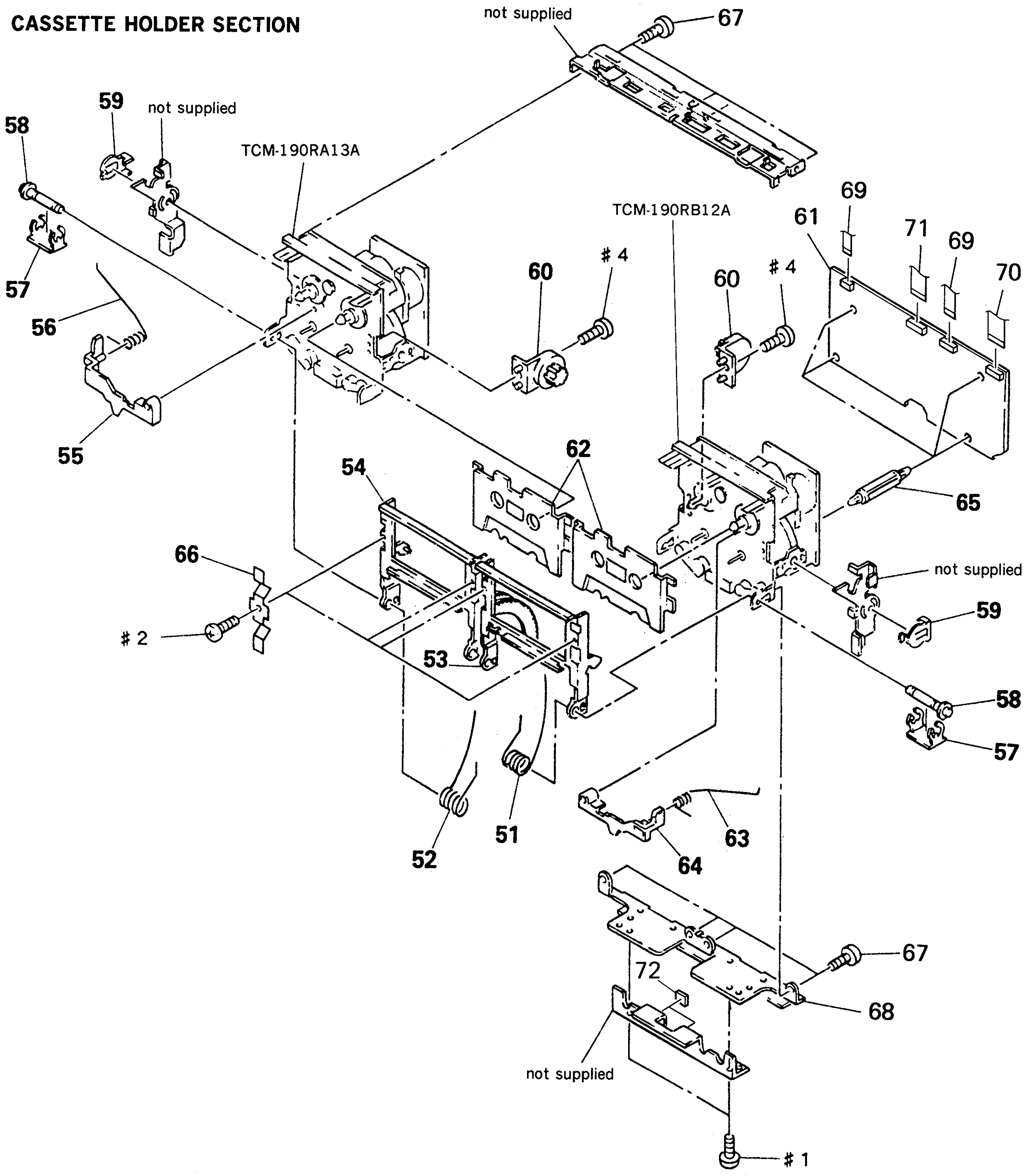
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)... (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Hardware (# mark) list is given in the last of this parts list.
- TR : Tourist model

6-1. CABINET SECTION



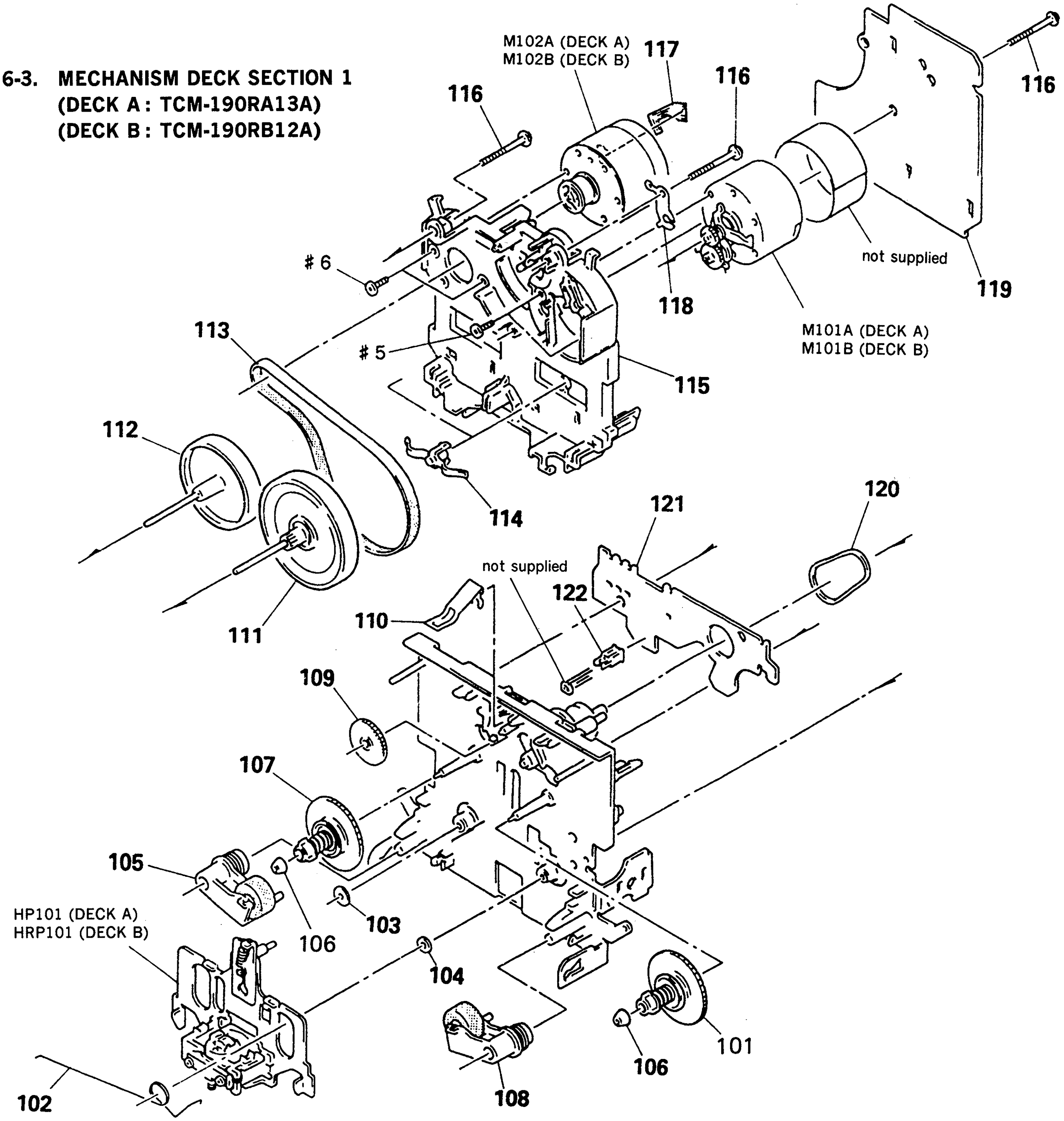
Ref. No.	Part No.	Description	Remark
1	4-942-636-01	EMBLEM (NO. 3. 5), SONY (AEP, Germany, UK)	
1	4-942-636-11	EMBLEM (NO. 3. 5), SONY (E, TR)	
* 2	3-703-713-41	STICKER, SONY SYMBOL (10)	
3	X-3363-046-1	LID (B) ASSY, CASSETTE (AEP, Germany, UK)	
3	X-3364-663-1	LID (B) ASSY, CASSETTE (E, TR)	
4	X-3363-140-1	LID (A) ASSY, CASSETTE (AEP, Germany, UK)	
4	X-3363-413-1	LID (A) ASSY, CASSETTE (E, TR)	
5	X-3364-835-2	PANEL (/H) ASSY, FRONT (AEP, Germany, UK)	
5	X-3365-297-2	PANEL (/N) ASSY, FRONT (E, TR)	
6	3-567-110-00	SPRING, TENSION	
7	4-930-336-21	FOOT (FELT)	
8	3-363-099-01	SCREW (CASE +3X8 TP2)	
9	4-932-841-01	CASE (AEP, Germany, UK)	
* 9	4-932-841-81	CASE (E, TR)	
* 10	A-2006-692-A	PANEL BOARD, COMPLETE	
* 11	3-374-471-61	PANEL, BACK (AEP, UK)	
* 11	3-374-471-71	PANEL, BACK (Germany)	
* 11	3-375-041-31	PANEL, BACK (E, TR)	
* 12	A-2006-709-A	PIN JACK BOARD, COMPLETE	
* 13	3-703-353-02	SUPPORT, PC BOARD	
* 14	A-2006-710-A	POWER BOARD, COMPLETE	
* 15	3-309-144-21	HEAT SINK	
16	X-3362-924-1	WINDOW (PANEL) ASSY (AEP, Germany, UK)	
16	X-3363-412-1	WINDOW (PANEL) ASSY (E, TR)	
* 17	1-573-188-11	CONNECTOR, BRIDGE 7P	
* 18	1-573-389-11	COONECTOR, BRIDGE 8P	
19	3-367-893-01	PLATE (TOP), ORNAMENTAL (AEP, Germany, UK)	
19	3-367-893-21	PLATE (TOP), ORNAMENTAL (E, TR)	
20	3-377-931-11	PLATE (PANEL), ORNAMENTAL (AEP, Germany, UK)	
20	3-377-931-21	PLATE (PANEL), ORNAMENTAL (E, TR)	
FL351	1-519-708-11	INDICATOR TUBE, FLUORESCENT	

6-2. CASSETTE HOLDER SECTION


not supplied
67
59
not supplied
58
TCM-190RA13A
57
56
55
69
61
71
69
70
TCM-190RB12A
60
# 4
60
# 4
62
54
65
66
not supplied
59
# 2
53
58
57
51
52
63
64
67
72
68
not supplied
# 1

Ref. No.	Part No.	Description	Remark
51	3-354-960-01	SPRING (LOADING R), TORSION	
52	3-354-959-01	SPRING (LOADING L), TORSION	
53	X-3362-856-1	HOLDER (R) ASSY, CASSETTE	
54	X-3362-857-1	HOLDER (L) ASSY, CASSETTE	
55	3-354-955-01	LEVER (EJECT SAFETY LEVER L)	
56	3-354-961-01	SPRING (EJECT SAFETY SPRING L)	
57	3-367-720-01	RING (W), RETAINING	
58	3-367-721-01	SHAFT (FULCRUM SHAFT)	
59	3-354-957-01	JOINT (LOCK LEVER)	
60	3-354-963-01	DAMPER	
* 61	A-2006-708-A	MAIN BOARD, COMPLETE	
62	3-367-711-01	RETAINER, CASSETTE	
63	3-354-962-01	SPRING (EJECT SAFETY SPRING R)	
64	3-354-956-01	LEVER (EJECT SAFETY LEVER R)	
* 65	3-682-419-21	HOLDER, P.C.B	
66	3-340-137-01	SPRING, CASSETTE RETAINER	
67	4-951-620-01	SCREW (2.6X8), +BVTP	
* 68	3-367-724-01	JOINT (LOWER)	
69	1-590-902-11	WIRE, FLAT TYPE (9 CORE)	
70	1-590-903-11	WIRE, FLAT TYPE (15 CORE)	
71	1-590-904-11	WIRE, FLAT TYPE (12 CORE)	
* 72	3-563-504-01	PLATE, ADJUSTMENT	

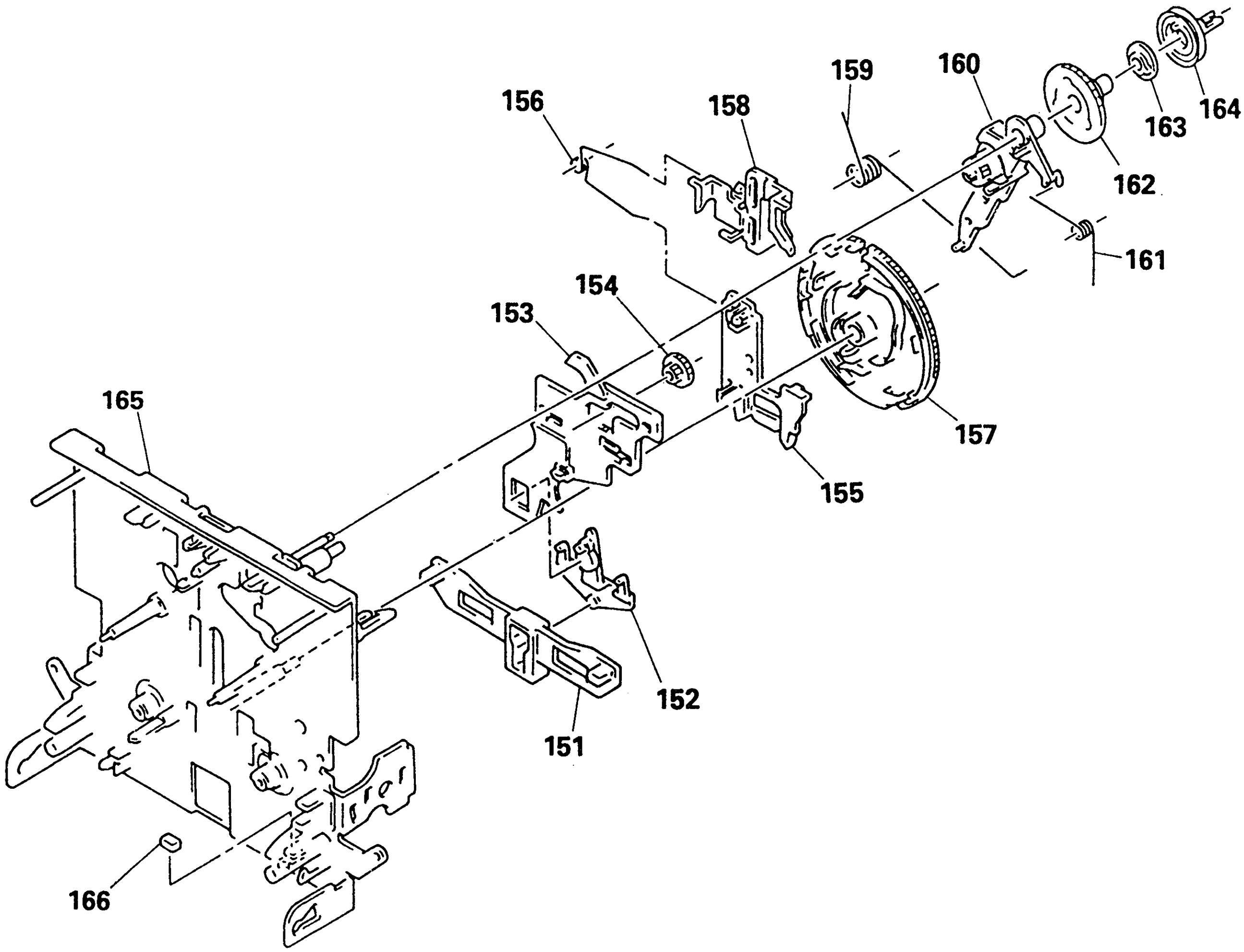
6-3. MECHANISM DECK SECTION 1
(DECK A : TCM-190RA13A)
(DECK B : TCM-190RB12A)


M102A (DECK A)
M102B (DECK B)
117
116
116
116
#6
not supplied
119
118
M101A (DECK A)
M101B (DECK B)
113
#5
115
112
114
121
120
not supplied
122
110
111
109
107
105
HP101 (DECK A)
HRP101 (DECK B)
106
103
104
101
106
102
108

Ref. No.	Part No.	Description	Remark
101	X-3359-404-1	TABLE ASSY, REEL	
102	3-359-455-01	SPRING, TORSION	
103	3-356-714-01	WASHER	
104	3-356-713-01	WASHER	
105	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY	
106	3-362-308-01	CAP (REEL)	
107	X-3362-078-1	TABLE ASSY (B), REEL	
108	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY	
109	3-359-424-01	GEAR (REV GEAR)	
110	3-359-430-01	SPRING(CASSETTE RETAINER), LEAF	
111	X-3364-554-1	FLYWHEEL (FWD) ASSY	
112	X-3359-410-1	FLYWHEEL (REV) ASSY	
113	3-359-417-01	BELT (FLAT), CAPSTAN	
114	3-575-321-00	RETAINER, THRUST, CAPSTAN	
* 115	3-359-436-01	BASE (THRUST RETAINER), FITTING	

Ref. No.	Part No.	Description	Remark
116	3-359-414-01	SCREW (+PTPWH 2X23)	
117	1-638-983-11	MOTOR FLEXIBLE BOARD	
118	3-359-450-01	PLATE, GROUND	
* 119	A-2006-399-A	MD-A BOARD, COMPLETE (DECK A)	
* 119	A-2006-401-A	MD-B HX PRO BOARD, COMPLETE (DECK B)	
120	3-359-466-01	BELT (FR), SQUARE	
* 121	1-634-841-14	SW-A BOARD (DECK A)	
* 121	1-634-841-14	SW-B BOARD (DECK B)	
122	3-343-419-01	HOLDER (S SENSOR)	
HP101	A-2003-868-A	BASE ASSY, HEAD (PB) (DECK A)	
HRP101	A-2003-838-A	BASE ASSY, HEAD (REC/PB) (DECK B)	
M101A	X-3363-501-1	MOTOR ASSY, REEL (DECK A)	
M101B	X-3363-501-1	MOTOR ASSY, REEL (DECK B)	
M102A	X-3359-417-1	MOTOR ASSY, CAPSTAN (DECK A)	
M102B	X-3359-417-1	MOTOR ASSY, CAPSTAN (DECK B)	

6-4. MECHANISM DECK SECTION 2
(DECK A : TCM-190RA13A)
(DECK B : TCM-190RB12A)



Ref. No.	Part No.	Description	Remark
* 151	3-359-425-01	SLIDER (REVERSE SLIDER)	
152	3-359-426-01	LEVER (REVERSE LEVER)	
* 153	3-359-415-01	SLIDER (TRIGGER SLIDER)	
154	3-359-448-01	GEAR (TRIGGER)	
* 155	3-359-427-01	SLIDER (LEVERSE SLIDER)	
156	3-359-454-01	SPRING, TORSION	
157	3-359-420-01	GEAR (CAM GEAR)	
158	3-359-429-01	SLIDER (BRAKE PLATE)	
159	3-359-456-01	SPRING(TRIGGER SPRING), TORSION	
160	X-3359-405-1	LEVER (FR ARM) ASSY	
161	3-359-453-01	SPRING (FR ARM), TORSION	
162	3-359-419-01	GEAR (FR GEAR)	
163	3-359-421-01	CLUTCH (REEL DISK)	
164	3-359-418-01	PULLEY (FR PULLEY)	
165	X-3363-790-1	CHASSIS ASSY, MECHANICAL	
166	3-359-469-01	SPACER	

MAIN

SECTION 7
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-2006-708-A	MAIN BOARD, COMPLETE ********************			
		< CAPACITOR >			
C101	1-136-158-00	FILM	0.027uF	5%	50V
C102	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C103	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C104	1-106-351-00	MYLAR	2200PF	5%	200V
C105	1-106-351-00	MYLAR	2200PF	5%	200V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-136-174-00	FILM	0.56uF	5%	50V
C108	1-136-171-00	FILM	0.33uF	5%	50V
C109	1-164-346-11	CERAMIC CHIP	1uF		16V
C110	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C111	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C112	1-164-346-11	CERAMIC CHIP	1uF		16V
C113	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C114	1-164-346-11	CERAMIC CHIP	1uF		16V
C115	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C116	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C201	1-136-158-00	FILM	0.027uF	5%	50V
C202	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C203	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C204	1-106-351-00	MYLAR	2200PF	5%	200V
C205	1-106-351-00	MYLAR	2200PF	5%	200V
C206	1-164-346-11	CERAMIC CHIP	1uF		16V
C207	1-136-174-00	FILM	0.56uF	5%	50V
C208	1-136-171-00	FILM	0.33uF	5%	50V
C209	1-164-346-11	CERAMIC CHIP	1uF		16V
C210	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C211	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C212	1-164-346-11	CERAMIC CHIP	1uF		16V
C213	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C214	1-164-346-11	CERAMIC CHIP	1uF		16V
C215	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C216	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C601	1-164-346-11	CERAMIC CHIP	1uF		16V
C602	1-164-346-11	CERAMIC CHIP	1uF		16V
C603	1-164-346-11	CERAMIC CHIP	1uF		16V
C604	1-164-346-11	CERAMIC CHIP	1uF		16V
C605	1-164-346-11	CERAMIC CHIP	1uF		16V
C606	1-164-346-11	CERAMIC CHIP	1uF		16V
C607	1-164-346-11	CERAMIC CHIP	1uF		16V
C608	1-124-257-00	ELECT	2.2uF	20%	50V
C609	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C610	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C611	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C612	1-124-257-00	ELECT	2.2uF	20%	50V
C615	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C616	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C617	1-124-472-11	ELECT	470uF	20%	10V
C618	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C619	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C620	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C621	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C622	1-124-472-11	ELECT	470uF	20%	10V
C623	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C624	1-124-472-11	ELECT	470uF	20%	10V
C625	1-126-059-11	ELECT	10uF	20%	50V
C626	1-126-059-11	ELECT	10uF	20%	50V
C629	1-126-157-11	ELECT	10uF	20%	16V
C632	1-136-594-11	FILM	0.018uF	5%	100V
C633	1-124-465-00	ELECT	0.47uF	20%	50V
C639	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C862	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C6008	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C6009	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C6010	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C6011	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C6012	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C6013	1-126-023-11	ELECT	100uF	20%	16V
C6020	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C6021	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C6022	1-126-163-11	ELECT	4.7uF	20%	50V
C6026	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C6027	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C6029	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C6030	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C6031	1-163-038-00	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description	Remark
C6035	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
C6050	1-126-157-11	ELECT 10uF 20% 16V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
CN601	1-573-101-11	SOCKET, CONNECTOR 9P	
CN602	1-580-783-11	CONNECTOR, BOARD TO BOARD	
CN603	1-573-101-11	SOCKET, CONNECTOR 9P	
CN604	1-580-783-11	CONNECTOR, BOARD TO BOARD	
* CN605	1-568-858-11	SOCKET, CONNECTOR 15P	
CN606	1-568-795-11	SOCKET, CONNECTOR 12P	
CN607	1-580-783-11	CONNECTOR, BOARD TO BOARD	

< DIODE >

Ref. No.	Part No.	Description	Remark
D601	8-719-422-91	DIODE MA8091	
D602	8-719-016-74	DIODE 1SS352	
D603	8-719-016-74	DIODE 1SS352	
D604	8-719-210-39	DIODE EC10QS-04	
D605	8-719-016-74	DIODE 1SS352	
D606	8-719-422-46	DIODE MA8056	
D607	8-719-210-33	DIODE EC10DS2	
D608	8-719-210-33	DIODE EC10DS2	
D6010	8-719-016-74	DIODE 1SS352	
D6011	8-719-016-74	DIODE 1SS352	

< IC >

Ref. No.	Part No.	Description	Remark
IC101	8-759-300-71	IC HD14053BFP	
IC102	8-752-037-90	IC CXA1331M	
IC103	8-752-055-60	IC CXA1578M	
IC104	8-759-636-55	IC M5218AFP	
IC105	8-759-516-47	IC CD4066BCM	
IC106	8-759-998-71	IC BA3308F	
IC601	8-759-058-40	IC M50944-128FP	
IC602	8-759-636-67	IC M50925-482FP	
IC603	8-759-207-05	IC TA7272P	
IC604	8-759-636-55	IC M5218AFP	
IC605	8-759-516-41	IC CD4052BCM	
IC6001	8-759-634-43	IC M51953BFP	

< COIL >

Ref. No.	Part No.	Description	Remark
L601	1-410-761-11	INDUCTOR 0.68mH	
L6001	1-410-482-31	INDUCTOR 100uH	
L6002	1-410-381-11	INDUCTOR CHIP 10uH	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q101	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q102	8-729-113-40	TRANSISTOR FA1A4Z-L68	
Q201	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q202	8-729-113-40	TRANSISTOR FA1A4Z-L68	
Q601	8-729-805-65	TRANSISTOR 2SA1344	
Q602	8-729-805-65	TRANSISTOR 2SA1344	
Q603	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q604	8-729-805-65	TRANSISTOR 2SA1344	
Q605	8-729-805-69	TRANSISTOR 2SA1341	
Q606	8-729-805-45	TRANSISTOR 2SC3395	
Q607	8-729-805-65	TRANSISTOR 2SA1344	
Q608	8-729-805-65	TRANSISTOR 2SA1344	
Q609	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q611	8-729-805-65	TRANSISTOR 2SA1344	
Q612	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q613	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q616	8-729-804-41	TRANSISTOR 2SB1122-S	
Q617	8-729-804-41	TRANSISTOR 2SB1122-S	
Q619	8-729-808-01	TRANSISTOR 2SD1622-S	
Q620	8-729-808-01	TRANSISTOR 2SD1622-S	
Q6005	8-729-113-13	TRANSISTOR FA1A4M-L33	

< RESISTOR >

Ref. No.	Part No.	Description	Remark
R101	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R102	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R103	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R104	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R105	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R106	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R107	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R108	1-216-043-00	METAL CHIP 560 5% 1/10W	
R109	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R110	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R111	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R112	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R113	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R114	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R115	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R116	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R117	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R118	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R119	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R120	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R121	1-216-295-00	METAL CHIP 0 5% 1/10W	
R201	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R202	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R203	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R204	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R205	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R206	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R207	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R208	1-216-043-00	METAL CHIP 560 5% 1/10W	
R209	1-216-073-00	METAL CHIP 10K 5% 1/10W	

MAIN

Ref. No.	Part No.	Description	Remark
R210	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R211	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R212	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R213	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R214	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R215	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R216	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R217	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R218	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R219	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R220	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R221	1-216-295-00	METAL CHIP 0 5% 1/10W	
R601	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R602	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R603	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R605	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R606	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R607	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R608	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R609	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R610	1-216-084-00	METAL CHIP 30K 5% 1/10W	
R611	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R612	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R615	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R616	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R617	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R618	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R619	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R620	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R621	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R623	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R624	1-216-295-00	METAL CHIP 0 5% 1/10W	
R625	1-216-295-00	METAL CHIP 0 5% 1/10W	
R626	1-216-295-00	METAL CHIP 0 5% 1/10W	
R628	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R629	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R630	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R631	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R634	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R635	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R636	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R637	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R638	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R639	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R640	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R641	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R642	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R643	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R644	1-216-025-00	METAL CHIP 100 5% 1/10W	
R645	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R646	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R647	1-216-025-00	METAL CHIP 100 5% 1/10W	
R648	1-216-025-00	METAL CHIP 100 5% 1/10W	
R649	1-216-025-00	METAL CHIP 100 5% 1/10W	
R650	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R651	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R652	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R653	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R654	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R655	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R656	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R661	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R662	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R663	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R664	1-216-045-00	METAL CHIP 680 5% 1/10W	
R665	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R666	1-216-045-00	METAL CHIP 680 5% 1/10W	
R667	1-216-025-00	METAL CHIP 100 5% 1/10W	
R668	1-216-090-00	METAL CHIP 51K 5% 1/10W	
R669	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R670	1-216-084-00	METAL CHIP 30K 5% 1/10W	
R671	1-216-090-00	METAL CHIP 51K 5% 1/10W	
R672	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R673	1-216-080-00	METAL CHIP 20K 5% 1/10W	
R674	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R675	1-216-080-00	METAL CHIP 20K 5% 1/10W	
R676	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R677	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R678	1-216-084-00	METAL CHIP 30K 5% 1/10W	
R679	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R680	1-216-090-00	METAL CHIP 51K 5% 1/10W	
R681	1-216-090-00	METAL CHIP 51K 5% 1/10W	
R682	1-216-025-00	METAL CHIP 100 5% 1/10W	
R686	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R687	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R690	1-216-025-00	METAL CHIP 100 5% 1/10W	
R691	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R692	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R693	1-216-025-00	METAL CHIP 100 5% 1/10W	
R695	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R696	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R697	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
R698	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R699	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R700	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R6004	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R6005	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R6010	1-216-049-00	METAL CHIP 1K 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R6011	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6012	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6013	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6014	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6015	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6016	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6017	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6018	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R6050	1-216-025-00	METAL CHIP 100 5% 1/10W	
⚠R6051	1-212-974-00	FUSIBLE 47 5% 1/2W	F
R6060	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R6070	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R6080	1-216-097-00	METAL CHIP 100K 5% 1/10W	

< VARIABLE RESISTOR >

RV101	1-241-136-11	RES, ADJ, CARBON 10K	
RV201	1-241-136-11	RES, ADJ, CARBON 10K	

< TRANSFORMER >

T601	1-450-458-11	TRANSFORMER, DC-DC CONVERTER	

< TEST PIN >

* TP601	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
* TP6001	1-564-517-11	PLUG, CONNECTOR 2P	

< VIBRATOR >

X601	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	

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* A-2006-399-A MD-A BOARD, COMPLETE

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< CAPACITOR >

C11	1-163-131-00	CERAMIC CHIP 390PF 5% 50V	
C12	1-136-157-00	FILM 0.022uF 5% 50V	
C13	1-124-234-00	ELECT 22uF 20% 16V	
C18	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C21	1-163-131-00	CERAMIC CHIP 390PF 5% 50V	
C22	1-136-157-00	FILM 0.022uF 5% 50V	
C23	1-124-234-00	ELECT 22uF 20% 16V	
C28	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C31	1-124-234-00	ELECT 22uF 20% 16V	
C32	1-124-234-00	ELECT 22uF 20% 16V	
C71	1-164-346-11	CERAMIC CHIP 1uF 16V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD	
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P	
* CNP32	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P	
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P	

< IC >

IC31A	8-759-106-02	IC uPC4570G2	

< JUMPER RESISTOR >

JW1	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW51	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW52	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW53	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW54	1-216-296-00	METAL CHIP 0 5% 1/8W	

< TRANSISTOR >

Q71A	8-729-602-36	TRANSISTOR 2SA1602-F	

< RESISTOR >

R11	1-216-099-00	METAL CHIP 120K 5% 1/10W	
R12	1-216-025-00	METAL CHIP 100 5% 1/10W	
R13	1-216-100-00	METAL GLAZE 130K 5% 1/10W	
R14	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R21	1-216-099-00	METAL CHIP 120K 5% 1/10W	
R22	1-216-025-00	METAL CHIP 100 5% 1/10W	
R23	1-216-100-00	METAL GLAZE 130K 5% 1/10W	
R24	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R31	1-216-033-00	METAL CHIP 220 5% 1/10W	
R32	1-216-033-00	METAL CHIP 220 5% 1/10W	
R71	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R72	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R73	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R74	1-216-089-00	METAL CHIP 47K 5% 1/10W	

< VARIABLE RESISTOR >

RV11A	1-241-627-11	RES, ADJ, CARBON 1K	
RV21A	1-241-627-11	RES, ADJ, CARBON 1K	
RV71A	1-241-630-11	RES, ADJ, CARBON 10K	
RV72A	1-241-630-11	RES, ADJ, CARBON 10K	

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* A-2006-401-A MD-B HX PRO BOARD, COMPLETE

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< CAPACITOR >

C11	1-163-131-00	CERAMIC CHIP 390PF 5% 50V	
C12	1-136-157-00	FILM 0.022uF 5% 50V	
C13	1-124-234-00	ELECT 22uF 20% 16V	
C18	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C21	1-163-131-00	CERAMIC CHIP 390PF 5% 50V	
C22	1-136-157-00	FILM 0.022uF 5% 50V	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

MD-B HX PRO

Ref. No.	Part No.	Description			Remark
C23	1-124-234-00	ELECT	22uF	20%	16V
C28	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C31	1-124-234-00	ELECT	22uF	20%	16V
C32	1-124-234-00	ELECT	22uF	20%	16V
C33	1-124-234-00	ELECT	22uF	20%	16V
C51	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C52	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C53	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C54	1-136-601-11	FILM	0.01uF	5%	630V
C56	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C57	1-164-346-11	CERAMIC CHIP	1uF		16V
C71	1-164-346-11	CERAMIC CHIP	1uF		16V
C80	1-124-234-00	ELECT	22uF	20%	16V
C81	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C82	1-136-157-00	FILM	0.022uF	5%	50V
C83	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C84	1-136-478-11	FILM	470PF	5%	630V
C85	1-136-433-11	FILM	100PF	5%	630V
C86	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V
C87	1-136-273-91	FILM	75PF	5%	630V
C88	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C89	1-124-234-00	ELECT	22uF	20%	16V
C90	1-107-045-00	MICA	3.9PF		500V
C91	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C92	1-136-157-00	FILM	0.022uF	5%	50V
C93	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C94	1-136-478-11	FILM	470PF	5%	630V
C95	1-136-433-11	FILM	100PF	5%	630V
C96	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V
C97	1-136-273-91	FILM	75PF	5%	630V
C98	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C99	1-164-005-11	CERAMIC CHIP	0.47uF		25V

< CONNECTOR >

Ref. No.	Part No.	Description
* CNP31	1-580-782-11	CONNECTOR, BOARD TO BOARD
* CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P
* CNP33	1-580-782-11	CONNECTOR, BOARD TO BOARD
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P
* CNP72	1-580-411-11	SOCKET, CONNECTOR 4P

< DIODE >

Ref. No.	Part No.	Description	
D31	8-719-016-74	DIODE	1SS352

< IC >

Ref. No.	Part No.	Description	
IC31B	8-759-106-02	IC	uPC4570G2
IC81C	8-759-106-56	IC	uPC1297CA

< COIL >

Ref. No.	Part No.	Description	
L81	1-410-780-11	INDUCTOR	27mH
L91	1-410-780-11	INDUCTOR	27mH

< TRANSISTOR >

Ref. No.	Part No.	Description	
Q51	8-729-808-01	TRANSISTOR	2SD1622-S
Q52	8-729-808-01	TRANSISTOR	2SD1622-S
Q53	8-729-808-01	TRANSISTOR	2SD1622-S
Q71	8-729-216-22	TRANSISTOR	2SA1162-C

< RESISTOR >

Ref. No.	Part No.	Description			Remark
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W
R12	1-216-025-00	METAL CHIP	100	5%	1/10W
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R14	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-025-00	METAL CHIP	100	5%	1/10W
R23	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R24	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
R51	1-216-097-00	METAL CHIP	100K	5%	1/10W
R52	1-216-097-00	METAL CHIP	100K	5%	1/10W
R53	1-216-073-00	METAL CHIP	10K	5%	1/10W
R54	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R55	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R57	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-00	METAL CHIP	47K	5%	1/10W
R74	1-216-089-00	METAL CHIP	47K	5%	1/10W
R81	1-216-073-00	METAL CHIP	10K	5%	1/10W
R82	1-216-085-00	METAL CHIP	33K	5%	1/10W
R83	1-216-001-00	METAL CHIP	10	5%	1/10W
R84	1-216-101-00	METAL CHIP	150K	5%	1/10W
R85	1-216-075-00	METAL CHIP	12K	5%	1/10W
R91	1-216-073-00	METAL CHIP	10K	5%	1/10W
R92	1-216-085-00	METAL CHIP	33K	5%	1/10W
R93	1-216-001-00	METAL CHIP	10	5%	1/10W
R94	1-216-101-00	METAL CHIP	150K	5%	1/10W
R95	1-216-075-00	METAL CHIP	12K	5%	1/10W

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description
RV11B	1-241-627-11	RES, ADJ, CARBON 1K
RV21B	1-241-627-11	RES, ADJ, CARBON 1K
RV71B	1-241-630-11	RES, ADJ, CARBON 10K
RV72B	1-241-630-11	RES, ADJ, CARBON 10K
RV81	1-241-122-11	RES, ADJ, CARBON 22K

Ref. No.	Part No.	Description	Remark
RV91	1-241-122-11	RES, ADJ, CARBON 22K	

< RELAY >

Ref. No.	Part No.	Description	Remark
RY31	1-515-726-11	RELAY	

< TRANSFORMER >

Ref. No.	Part No.	Description	Remark
T51	1-406-417-11	COIL, BIAS OSCILLATION	
T81	1-433-381-11	TRANSFORMER, BIAS OSCILLATOR	
T91	1-433-381-11	TRANSFORMER, BIAS OSCILLATOR	

< TEST PIN >

Ref. No.	Part No.	Description	Remark
* TP81	1-568-449-11	HOUSING, CONNECTOR(PC BOARD)3P	

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* A-2006-692-A PANEL BOARD, COMPLETE

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Ref. No.	Part No.	Description	Remark
*	3-367-839-01	HOLDER, FL TUBE	
	3-377-932-01	SPRING, GROUND	

< CAPACITOR >

Ref. No.	Part No.	Description				Remark
C351	1-126-163-11	ELECT	4.7uF	20%	50V	
C352	1-124-638-11	ELECT	22uF	20%	10V	
C353	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C354	1-164-232-11	CERAMIC CHIP	0.01uF		50V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
CN351	1-580-883-21	SOCKET, CONNECTOR (SMT) 12P	

< DIODE >

Ref. No.	Part No.	Description	Remark
D301	8-719-312-30	LED SEL4226R-CD (DUBBING MODE)	
D302	8-719-312-30	LED SEL4226R-CD (CD SYNCHRO)	

< FLUORESCENT INDICATOR >

Ref. No.	Part No.	Description	Remark
FL351	1-519-708-11	INDICATOR TUBE, FLUORESCENT	

< IC >

Ref. No.	Part No.	Description	Remark
IC351	8-759-323-35	IC HD-614023-FA93	

< RESISTOR >

Ref. No.	Part No.	Description				Remark
R351	1-216-029-00	METAL CHIP	150	5%	1/10W	
R352	1-216-033-00	METAL CHIP	220	5%	1/10W	
R353	1-216-037-00	METAL CHIP	330	5%	1/10W	
R354	1-216-041-00	METAL CHIP	470	5%	1/10W	
R355	1-216-045-00	METAL CHIP	680	5%	1/10W	
R356	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R357	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R359	1-216-045-00	METAL CHIP	680	5%	1/10W	
R362	1-216-041-00	METAL CHIP	470	5%	1/10W	
R363	1-216-045-00	METAL CHIP	680	5%	1/10W	
R364	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R365	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R366	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R367	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R368	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R369	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R372	1-216-041-00	METAL CHIP	470	5%	1/10W	
R374	1-216-037-00	METAL CHIP	330	5%	1/10W	
R375	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R376	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R377	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R378	1-216-025-00	METAL CHIP	100	5%	1/10W	
R379	1-216-025-00	METAL CHIP	100	5%	1/10W	
R380	1-216-025-00	METAL CHIP	100	5%	1/10W	
R381	1-216-025-00	METAL CHIP	100	5%	1/10W	

< SWITCH >

Ref. No.	Part No.	Description	Remark
S901	1-554-303-21	SWITCH, TACTILE (CD SYNCHRO)	
S902	1-554-303-21	SWITCH, TACTILE (◀◀)	
S903	1-554-303-21	SWITCH, TACTILE (▶▶)	
S904	1-554-303-21	SWITCH, TACTILE (● REC)	
S905	1-692-064-11	SWITCH, TACTIL (DECK A)	
S906	1-692-064-11	SWITCH, TACTIL (DECK B)	
S907	1-554-303-21	SWITCH, TACTILE (COUNTER RESET)	
S908	1-554-303-21	SWITCH, TACTILE (DOLBY NR)	
S909	1-554-303-21	SWITCH, TACTILE (DUBBING MODE)	
S910	1-554-303-21	SWITCH, TACTILE (■)	
S911	1-554-303-21	SWITCH, TACTILE (▷)	
S912	1-554-303-21	SWITCH, TACTILE (◁)	
S913	1-554-303-21	SWITCH, TACTILE (❚❚ PAUSE)	
S914	1-554-303-21	SWITCH, TACTILE (○ MUTE)	
S915	1-554-303-21	SWITCH, TACTILE (DIRECTION MODE)	

< VIBRATOR >

Ref. No.	Part No.	Description	Remark
X951	1-577-101-11	VIBRATOR, CERAMIC (4.19MHz)	

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* A-2006-709-A PIN JACK BOARD, COMPLETE

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< CAPACITOR >

Ref. No.	Part No.	Description				Remark
C401	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C402	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C403	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C404	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C405	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C407	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	

PIN JACK

Ref. No.	Part No.	Description			Remark
C409	1-124-465-00	ELECT	0.47uF	20%	50V
C410	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C411	1-126-163-11	ELECT	4.7uF	20%	50V
C412	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V
C413	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C414	1-124-257-00	ELECT	2.2uF	20%	50V
C416	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C417	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C418	1-126-157-11	ELECT	10uF	20%	16V
C419	1-126-157-11	ELECT	10uF	20%	16V
C451	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C452	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C453	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C454	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C455	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C457	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C459	1-124-465-00	ELECT	0.47uF	20%	50V
C460	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C461	1-126-163-11	ELECT	4.7uF	20%	50V
C462	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V
C463	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C464	1-124-257-00	ELECT	2.2uF	20%	50V
C466	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C467	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C468	1-126-012-11	ELECT	470uF	20%	16V
C469	1-126-012-11	ELECT	470uF	20%	16V
C470	1-126-012-11	ELECT	470uF	20%	16V
C481	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C482	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C483	1-126-177-11	ELECT	100uF	20%	10V
C484	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C485	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C486	1-126-157-11	ELECT	10uF	20%	16V
C487	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C488	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C489	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C490	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C491	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C492	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C493	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C494	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C495	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C496	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C497	1-126-301-11	ELECT	1uF	20%	50V
C4001	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C4002	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C4003	1-124-589-11	ELECT	47uF	20%	16V
C4006	1-101-005-00	CERAMIC	22000PF		50V
C4008	1-101-005-00	CERAMIC	22000PF		50V

Ref. No.	Part No.	Description			Remark
C4010	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C4013	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C4020	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C4021	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C4022	1-124-589-11	ELECT	47uF	20%	16V
C4030	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C4031	1-163-133-00	CERAMIC CHIP	470PF	5%	50V

< CONNECTOR >

* CNJ401	1-580-740-11	SOCKET, CONNECTOR 17P (SYSTEM CONTROL 2)
* CNJ402	1-573-187-11	PIN, CONNECTOR (PC BOARD) 7P
* CNJ403	1-573-388-11	PIN, CONNECTOR (PC BOARD) 8P

< DIODE >

D401	8-719-990-36	DIODE	DCA010
D403	8-719-210-33	DIODE	EC10DS2
D404	8-719-210-33	DIODE	EC10DS2
D405	8-719-990-36	DIODE	DCA010
D4001	8-719-016-74	DIODE	1SS352

< IC >

IC401	8-759-636-55	IC	M5218AFP
IC402	8-759-636-55	IC	M5218AFP
IC403	8-759-009-05	IC	MC14051BF
IC404	8-759-009-05	IC	MC14051BF
IC405	8-759-516-47	IC	CD4066BCM
IC406	8-759-636-35	IC	M50760-315FP
IC407	8-759-991-77	IC	BA7625

< JACK >

J401	1-565-304-11	JACK, PIN 4P (AUDIO: PHOTO IN, VIDEO 2 OUT)
* J402	1-569-812-11	JACK, PIN 6P (AUDIO: VIDEO 1/2 IN, VIDEO 1 OUT)
J404	1-573-144-11	JACK, PIN 2P (VIDEO: VIDEO 2 IN/OUT)
J405	1-565-933-11	JACK, PIN 3P (VIDEO: VIDEO 1 IN/OUT, MONITOR OUT)

< JUMPER RESISTOR >

JW2	1-216-295-00	METAL CHIP	0	5%	1/10W
JW3	1-216-295-00	METAL CHIP	0	5%	1/10W
JW8	1-216-295-00	METAL CHIP	0	5%	1/10W
JW10	1-216-295-00	METAL CHIP	0	5%	1/10W
JW12	1-216-295-00	METAL CHIP	0	5%	1/10W

< COIL >

L401	1-408-789-21	INDUCTOR CHIP	100uH
L4001	1-410-381-11	INDUCTOR CHIP	10uH

PIN JACK

Ref. No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q401	8-729-805-65	TRANSISTOR	2SA1344		
Q402	8-729-805-65	TRANSISTOR	2SA1344		
Q403	8-729-602-36	TRANSISTOR	2SA1602-F		
Q404	8-729-602-36	TRANSISTOR	2SA1602-F		
Q405	8-729-602-36	TRANSISTOR	2SA1602-F		
Q406	8-729-602-36	TRANSISTOR	2SA1602-F		
Q407	8-729-602-21	TRANSISTOR	2SC4154		
		< RESISTOR >			
R401	1-216-049-00	METAL CHIP	1K	5%	1/10W
R402	1-216-049-00	METAL CHIP	1K	5%	1/10W
R403	1-216-049-00	METAL CHIP	1K	5%	1/10W
R404	1-216-041-00	METAL CHIP	470	5%	1/10W
R405	1-216-041-00	METAL CHIP	470	5%	1/10W
R407	1-216-115-00	METAL CHIP	560K	5%	1/10W
R408	1-216-115-00	METAL CHIP	560K	5%	1/10W
R409	1-216-115-00	METAL CHIP	560K	5%	1/10W
R410	1-216-115-00	METAL CHIP	560K	5%	1/10W
R411	1-216-115-00	METAL CHIP	560K	5%	1/10W
R413	1-216-295-00	METAL CHIP	0	5%	1/10W
R414	1-216-295-00	METAL CHIP	0	5%	1/10W
R415	1-216-049-00	METAL CHIP	1K	5%	1/10W
R417	1-216-089-00	METAL CHIP	47K	5%	1/10W
R418	1-216-049-00	METAL CHIP	1K	5%	1/10W
R419	1-216-115-00	METAL CHIP	560K	5%	1/10W
R420	1-216-089-00	METAL CHIP	47K	5%	1/10W
R421	1-216-001-00	METAL CHIP	10	5%	1/10W
R422	1-216-075-00	METAL CHIP	12K	5%	1/10W
R423	1-216-041-00	METAL CHIP	470	5%	1/10W
R425	1-216-025-00	METAL CHIP	100	5%	1/10W
R426	1-216-089-00	METAL CHIP	47K	5%	1/10W
R427	1-216-089-00	METAL CHIP	47K	5%	1/10W
R428	1-216-089-00	METAL CHIP	47K	5%	1/10W
R429	1-216-089-00	METAL CHIP	47K	5%	1/10W
R430	1-216-089-00	METAL CHIP	47K	5%	1/10W
R431	1-216-022-00	METAL CHIP	75	5%	1/10W
R432	1-216-022-00	METAL CHIP	75	5%	1/10W
R434	1-216-073-00	METAL CHIP	10K	5%	1/10W
R435	1-216-073-00	METAL CHIP	10K	5%	1/10W
R436	1-216-089-00	METAL CHIP	47K	5%	1/10W
R437	1-216-121-00	METAL CHIP	1M	5%	1/10W
R439	1-216-295-00	METAL CHIP	0	5%	1/10W
R440	1-216-089-00	METAL CHIP	47K	5%	1/10W
R441	1-216-295-00	METAL CHIP	0	5%	1/10W
R442	1-216-089-00	METAL CHIP	47K	5%	1/10W
R450	1-216-081-00	METAL CHIP	22K	5%	1/10W
R451	1-216-049-00	METAL CHIP	1K	5%	1/10W
R452	1-216-049-00	METAL CHIP	1K	5%	1/10W
R453	1-216-049-00	METAL CHIP	1K	5%	1/10W
R454	1-216-041-00	METAL CHIP	470	5%	1/10W
R455	1-216-041-00	METAL CHIP	470	5%	1/10W
R457	1-216-115-00	METAL CHIP	560K	5%	1/10W
R458	1-216-115-00	METAL CHIP	560K	5%	1/10W
R459	1-216-115-00	METAL CHIP	560K	5%	1/10W
R460	1-216-115-00	METAL CHIP	560K	5%	1/10W
R461	1-216-115-00	METAL CHIP	560K	5%	1/10W
R463	1-216-295-00	METAL CHIP	0	5%	1/10W
R464	1-216-295-00	METAL CHIP	0	5%	1/10W
R465	1-216-049-00	METAL CHIP	1K	5%	1/10W
R467	1-216-089-00	METAL CHIP	47K	5%	1/10W
R468	1-216-049-00	METAL CHIP	1K	5%	1/10W
R469	1-216-115-00	METAL CHIP	560K	5%	1/10W
R470	1-216-089-00	METAL CHIP	47K	5%	1/10W
R471	1-216-001-00	METAL CHIP	10	5%	1/10W
R472	1-216-075-00	METAL CHIP	12K	5%	1/10W
R473	1-216-041-00	METAL CHIP	470	5%	1/10W
R475	1-216-025-00	METAL CHIP	100	5%	1/10W
R476	1-216-089-00	METAL CHIP	47K	5%	1/10W
R477	1-216-089-00	METAL CHIP	47K	5%	1/10W
R478	1-216-089-00	METAL CHIP	47K	5%	1/10W
R481	1-216-022-00	METAL CHIP	75	5%	1/10W
R482	1-216-022-00	METAL CHIP	75	5%	1/10W
R483	1-216-022-00	METAL CHIP	75	5%	1/10W
R484	1-216-049-00	METAL CHIP	1K	5%	1/10W
R485	1-216-049-00	METAL CHIP	1K	5%	1/10W
R486	1-216-049-00	METAL CHIP	1K	5%	1/10W
R487	1-216-029-00	METAL CHIP	150	5%	1/10W
R488	1-216-029-00	METAL CHIP	150	5%	1/10W
R489	1-216-031-00	METAL CHIP	180	5%	1/10W
R490	1-216-031-00	METAL CHIP	180	5%	1/10W
R491	1-216-031-00	METAL CHIP	180	5%	1/10W
R492	1-216-029-00	METAL CHIP	150	5%	1/10W
R493	1-216-073-00	METAL CHIP	10K	5%	1/10W
R494	1-216-073-00	METAL CHIP	10K	5%	1/10W
R495	1-216-081-00	METAL CHIP	22K	5%	1/10W
R496	1-216-081-00	METAL CHIP	22K	5%	1/10W
R497	1-216-073-00	METAL CHIP	10K	5%	1/10W
R499	1-216-073-00	METAL CHIP	10K	5%	1/10W
R500	1-216-081-00	METAL CHIP	22K	5%	1/10W
		< VIBRATOR >			
X401	1-577-077-11	OSCILLATOR, CERAMIC (400kHz)			

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POWER SW-A

Ref. No.	Part No.	Description	Remark
*	A-2006-710-A	POWER BOARD, COMPLETE ********************	
*	3-309-144-21	HEAT SINK	
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
	7-682-547-04	SCREW +BVTT 3X6 (S)	
		< CAPACITOR >	
C501	1-126-936-11	ELECT 3300uF 20%	16V
C502	1-126-936-11	ELECT 3300uF 20%	16V
C503	1-124-360-00	ELECT 1000uF 20%	16V
C504	1-126-936-11	ELECT 3300uF 20%	16V
C505	1-124-907-11	ELECT 10uF 20%	50V
C506	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C507	1-124-903-11	ELECT 1uF 20%	50V
C508	1-124-472-11	ELECT 470uF 20%	10V
C509	1-124-472-11	ELECT 470uF 20%	10V
C510	1-124-477-11	ELECT 47uF 20%	25V
C512	1-124-477-11	ELECT 47uF 20%	25V
C513	1-124-903-11	ELECT 1uF 20%	50V
C514	1-124-472-11	ELECT 470uF 20%	10V
C515	1-124-477-11	ELECT 47uF 20%	25V
C516	1-124-903-11	ELECT 1uF 20%	50V
C518	1-126-927-11	ELECT 2200uF 20%	10V
C519	1-124-473-11	ELECT 1000uF 20%	10V
C520	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C521	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C522	1-124-927-11	ELECT 4.7uF 20%	100V
C526	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C527	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C528	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C5001	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C5002	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C5004	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C5005	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C5110	1-124-903-11	ELECT 1uF 20%	50V
		< CONNECTOR >	
* CN401	1-568-834-11	SOCKET, CONNECTOR 15P	
* CN402	1-573-187-11	PIN, CONNECTOR (PC BOARD) 7P	
* CN403	1-573-388-11	PIN, CONNECTOR (PC BOARD) 8P	
		< DIODE >	
D501	8-719-210-39	DIODE EC10QS-04	
D502	8-719-210-39	DIODE EC10QS-04	
D503	8-719-210-39	DIODE EC10QS-04	
D504	8-719-210-39	DIODE EC10QS-04	
D505	8-719-016-74	DIODE 1SS352	
D506	8-719-021-77	DIODE UZM8.2Z	
D507	8-719-021-77	DIODE UZM8.2Z	
D508	8-719-210-33	DIODE EC10DS2	
D509	8-719-210-33	DIODE EC10DS2	
D510	8-719-210-33	DIODE EC10DS2	
D511	8-719-210-33	DIODE EC10DS2	
D512	8-719-016-74	DIODE 1SS352	
D513	8-719-016-74	DIODE 1SS352	
D514	8-719-016-74	DIODE 1SS352	
		< IC >	
IC501	8-759-041-09	IC LA5603-S	
		< IC LINK >	
⚠ICP501	1-532-843-21	LINK, IC (PRF2500) (2.5A)	
⚠ICP502	1-532-843-21	LINK, IC (PRF2500) (2.5A)	
		< TRANSISTOR >	
Q501	8-729-209-15	TRANSISTOR 2SD2012	
Q502	8-729-141-83	TRANSISTOR 2SA473	
Q503	8-729-805-65	TRANSISTOR 2SA1344	
Q504	8-729-602-21	TRANSISTOR 2SC4154	
Q505	8-729-602-21	TRANSISTOR 2SC4154	
Q506	8-729-602-36	TRANSISTOR 2SA1602-F	
Q510	8-729-602-21	TRANSISTOR 2SC4154	
		< RESISTOR >	
R501	1-216-033-00	METAL CHIP 220 5%	1/10W
R502	1-216-041-00	METAL CHIP 470 5%	1/10W
R503	1-216-041-00	METAL CHIP 470 5%	1/10W
R504	1-216-089-00	METAL CHIP 47K 5%	1/10W
R505	1-216-089-00	METAL CHIP 47K 5%	1/10W
R506	1-216-073-00	METAL CHIP 10K 5%	1/10W
R507	1-216-073-00	METAL CHIP 10K 5%	1/10W
R508	1-216-049-00	METAL CHIP 1K 5%	1/10W
R509	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R5001	1-216-025-00	METAL CHIP 100 5%	1/10W
R5002	1-216-025-00	METAL CHIP 100 5%	1/10W
**			
*	1-634-841-14	SW-A BOARD **********	
	3-343-419-01	HOLDER (S SENSOR A)	
		< CONNECTOR >	
* CNP81	1-568-852-11	SOCKET, CONNECTOR 9P	

The components identified by
mark ⚠ or dotted line with mark
⚠ are critical for safety.
Replace only with part number
specified.

Ref. No.	Part No.	Description	Remark
		< PHOTO SENSOR >	
IC81A	8-719-710-03	PHOTO SENSOR NJL5165K-B	
		< RESISTOR >	
R84	1-249-417-11	CARBON 1K 5% 1/4W	
R85	1-249-408-11	CARBON 180 5% 1/4W	
		< SWITCH >	
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP DET)	
S82	1-571-281-21	SWITCH, LEAF (CrO2 DET)	
S86	1-571-281-21	SWITCH, LEAF (HALF DET)	

****

Ref. No.	Part No.	Description	Remark
*	1-634-841-14	SW-B BOARD **********	
	3-343-419-01	HOLDER (S SENSOR B)	
		< CONNECTOR >	
* CNP81	1-568-852-11	SOCKET, CONNECTOR 9P	
		< PHOTO SENSOR >	
IC81B	8-719-710-03	PHOTO SENSOR NJL5165K-B	
		< RESISTOR >	
R81	1-249-414-11	CARBON 560 5% 1/4W	
R82	1-247-818-11	CARBON 300 5% 1/4W	
R83	1-247-834-11	CARBON 1.3K 5% 1/4W	
R84	1-249-417-11	CARBON 1K 5% 1/4W	
R85	1-249-408-11	CARBON 180 5% 1/4W	
		< SWITCH >	
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP DET)	
S82	1-571-281-21	SWITCH, LEAF (CrO2 DET)	
S83	1-571-281-21	SWITCH, LEAF (METAL DET)	
S84	1-571-281-21	SWITCH, LEAF (ERASE PROOF (SIDE A))	
S85	1-571-281-21	SWITCH, LEAF (ERASE PROOF (SIDE B))	
S86	1-571-281-21	SWITCH, LEAF (HALF DET)	

****

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS *************	
* 17	1-573-188-11	CONNECTOR, BRIDGE 7P	
* 18	1-573-389-11	COONECTOR, BRIDGE 8P	
69	1-590-902-11	WIRE, FLAT TYPE (9 CORE)	
70	1-590-903-11	WIRE, FLAT TYPE (15 CORE)	
71	1-590-904-11	WIRE, FLAT TYPE (12 CORE)	
117	1-638-983-11	MOTOR FLEXIBLE BOARD	
HP101	A-2003-868-A	BASE ASSY, HEAD (PB) (DECK A)	
HRP101	A-2003-838-A	BASE ASSY, HEAD (REC/PB) (DECK B)	
M101A	X-3363-501-1	MOTOR ASSY, REEL (DECK A)	
M101B	X-3363-501-1	MOTOR ASSY, REEL (DECK B)	
M102A	X-3359-417-1	MOTOR ASSY, CAPSTAN (DECK A)	
M102B	X-3359-417-1	MOTOR ASSY, CAPSTAN (DECK B)	

****

****

HARDWARE LIST

****

Ref. No.	Part No.	Description	Remark
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-621-255-15	SCREW +PTT 2X3 (S)	
#3	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#4	7-621-770-67	SCREW +PTT 2.6X6 (S)	
#5	7-627-556-08	SCREW +P 2.6X2.8	
#6	7-621-775-00	SCREW +B 2.6X3	
#7	7-682-547-04	SCREW +BVTT 3X6 (S)	
#8	7-621-849-00	SCREW, TAPPING	

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Sony Corporation
Audio Group

Published by Customer Relations and Service Group

SS-H6700

SERVICE MANUAL

AEP Model
UK Model

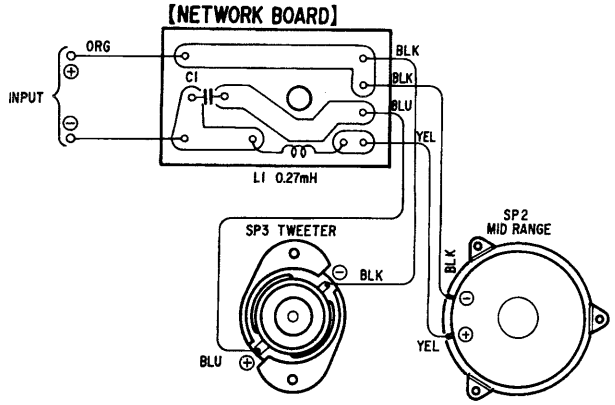
SPECIFICATIONS

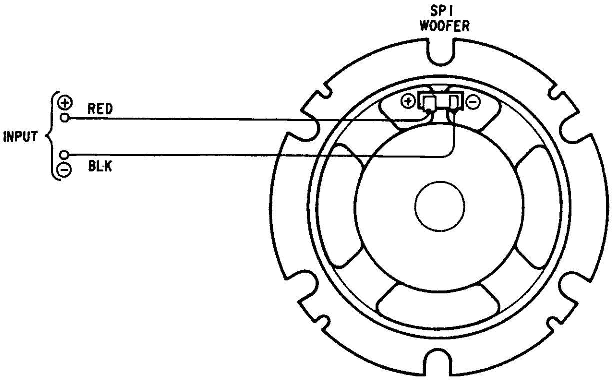
Speaker system	3-way, Dual enclosure
Satellite Unit	Mid-range : 8 cm ($3^{1}/_{5}$ in.) cone type Tweeter : 2.5 cm(1in.) balance drive type
Impedance	8 ohms
Maxmum input power	50W
Effective frequency range	150-20,000 Hz
Sensitivity	89 dB/W/m
Dimensions	Approx. 185x115x225mm(w/h/d) ($7^{3}/_{8}$ x $4^{5}/_{8}$ x $8^{7}/_{8}$ in.)
Weight	Approx. 1.8kg (3 lb 15 oz)
Bass Unit	Woofer : 15 cm (6 in.)cone type
Impedance	6 ohms
Maxmum input power	70W
Effective frequency range	40-150Hz
Sensitivity	89 dB/W/m
Dimensions	Approx. 185x250x225mm(w/h/d) ($7^{3}/_{8}$ x $9^{7}/_{8}$ x $8^{7}/_{8}$ in.)
Weight	Approx. 3.4kg (7 ld 8 oz)

Design and specifications subject to change without notice.

This set is the speaker system in MHC-6700

1. WIRING DIAGRAM


[NETWORK BOARD]
ORG
INPUT
⊕
⊖
C1
L1 0.27mH
BLK
BLK
BLU
YEL
SP3 TWEETER
⊖ BLK
BLU ⊕
SP2
MID RANGE
BLK
⊖
⊕
YEL


SP1
WOOFER
INPUT
⊕ RED
⊖ BLK
⊕
⊖

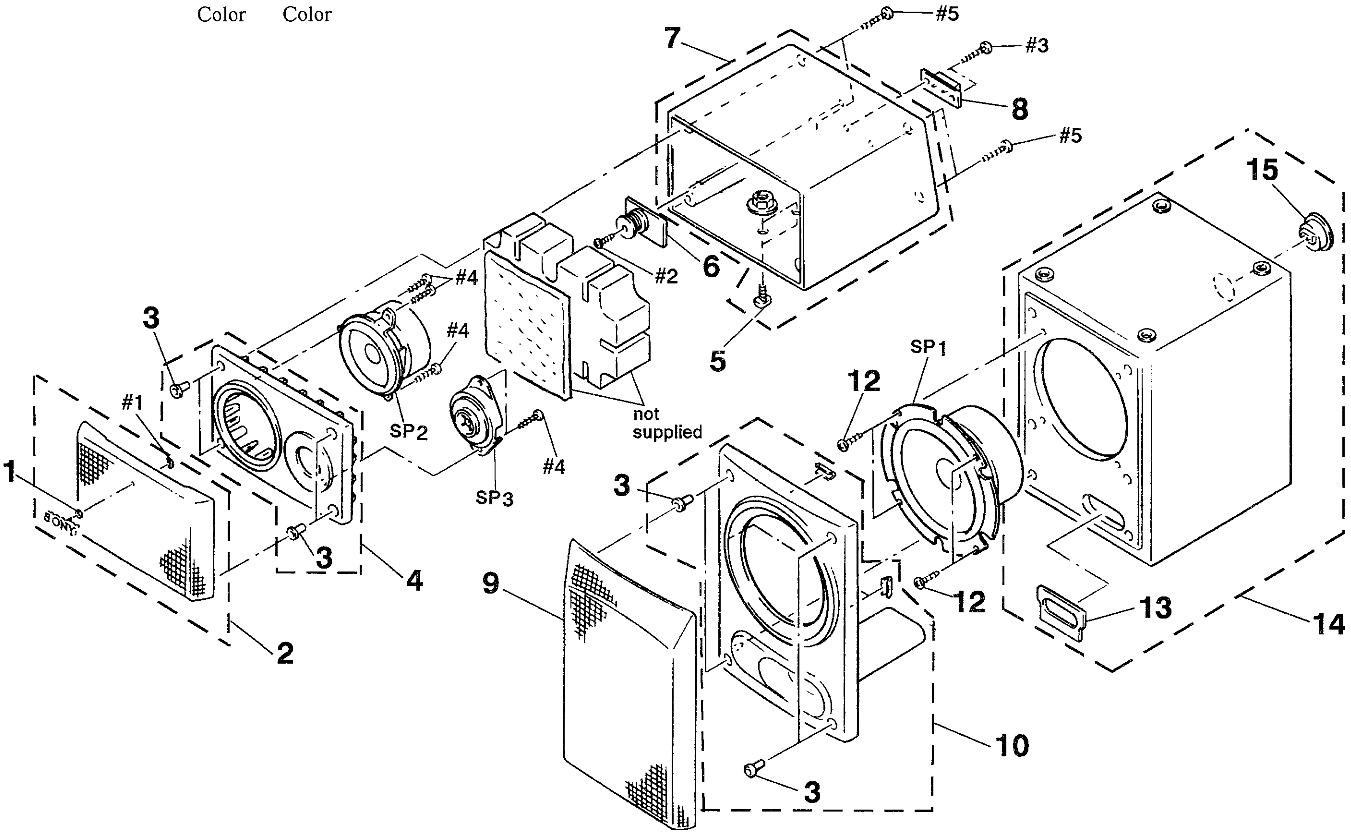
SPEAKER SYSTEM

SONY®

2. EXPLODED VIEW AND PARTS LIST

NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Color indication of Appearance Parts.
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Items marked " ＊ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Hardware (# mark) list is given in the last of this parts list.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
  IT:Italian model
  G:Germany model



Ref. No.	Part No.	Description	Remark
1	3-701-437-21	WASHER	
2	X-4942-205-1	FRAME (S) ASSY, GRILLE	
3	4-912-253-01	CATCHER	
4	X-4942-382-1	PANEL (S) ASSY, FRONT	
5	4-928-613-21	NUT, STAND FIXED	
＊ 6	1-589-388-11	MOUNTED PC BOARD (NETWORK)	
7	X-4942-383-1	CABINET (S) ASSY, SPEAKER	
8	1-537-337-31	TERMINAL BOARD (2P. SP)	
9	X-4942-208-1	FRAME (W) ASSY, GRILLE	
10	X-4942-384-1	PANEL (W) (R) ASSY, FRONT	
10	X-4942-385-1	PANEL (W) (L) ASSY, FRONT	
12	4-874-614-11	SCREW (4) (3.5X14), TAPPING	
＊ 13	4-949-398-01	PACKING (D)	
14	X-4942-386-1	CABINET (W) (R) ASSY, SPEAKER	(AEP, UK, IT)
14	X-4942-387-1	CABINET (W) (L) ASSY, SPEAKER	(AEP, UK, IT)
14	X-4942-398-1	CABINET (W) (R) ASSY, SPEAKER (G)	
14	X-4942-399-1	CABINET (W) (L) ASSY, SPEAKER (G)	

Ref. No.	Part No.	Description	Remark
15	1-537-332-11	TERMINAL BOARD	
SP1	1-544-628-11	SPEAKER (15cm)	
SP2	1-544-744-11	SPEAKER (8CM)	
SP3	1-544-626-11	SPEAKER (2.5CM)	
		< ACCESSORIES & PACKING MATERIALS >	
	1-590-855-11	CORD, SPEAKER	
	3-694-922-01	SHEET, PROTECTION	
	3-701-630-00	BAG, POLYETHYLENE	
	3-755-033-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE, GERMAN, DUTCH, SWEDISH, ITALIAN)	
＊	4-945-080-01	CUSHION	
		< HARDWARE LIST >	
#1	7-624-200-11	NUT, PUSH 2	
#2	7-685-165-01	SCREW +PTP 4X25 TYPE1	
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#4	7-685-660-79	SCREW +BVTP 4X10 TYPE2 IT-3	
#5	7-685-663-79	SCREW +BVTP 4X16 TYPE2 IT-3	

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